TYPE DESIGNS FOR INTERSECTIONS ON NATIONAL HIGHWAYS

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)

NEW DELHI
1995

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FOREWORD

1. It gives me great pleasure and satisfaction in presenting to highway professionals in the country this volume of type designs for intersections on National Highways. National Highway network, which is 33, 689 km long, has a large number of intersections with major as well as minor roads. Majority of intersections do not have properly designed layouts. As a consequence, the intersections act as potential accident spots. Studies have shown that roughly one third of all accidents take place at intersections. Poor layouts also affect smooth traffic flow and cause delays to vehicles. As such, scientific design of intersections can go a long way towards improved safety and better flow conditions on the NH system.

2. With rapid increase in traffic over the years, proper design of intersections has assumed urgency. Highway engineers have been handicapped so far to adopt suitable interesection designs for want of proper guidelines and standard designs. Recognising this requirement, the Ministry has developed this compendium of type designs covering different types of crossing situations. The designs presented include at-grade intersections for 4 lane/2 lane/single lane National Highways with intersecting roads of varying width. Usual T/Y intersections, 4 armed junctions and rotaries have been covered. In addition, some typical designs of grade-separated intersections i.e. diamond, trumpet, at-grade rotary and at-grade controlled intersection with NH flying over are given. The type designs are based on the recently finalised "IRC Guidelines for the Design of at-grade Intersections in Rural and Urban Areas" which is expected to be printed soon. Main parameters which form the basis of design are explained in the notes preceding the type drawings.

3. The type designs can be adapted with minor modifications at most of the intersections on National Highways. Complicated intersections would however need to be individually designed although the type designs can act as useful guide even in those cases. Essentially, the designs given are applicable to rural situations but these can be equally used in many of the semi-urban situations as well. With appropriate modifications, the junction designs will also prove useful for the State Roads.

4. A number of individuals have contributed to finalisation of the junction designs. I would like to specifically place on record the untiring efforts put in by S/Shri M.K. Bhalla, Chief Engineer (Traffic & Transportation) and J.B. Mathur, Superintending Engineer (Traffic & Transportation) in the Ministry, without which it would not have been possible to bring out this publication. Basic spadework in preparing the designs was done by the Consultants retained by the Ministry, i.e, National Transportation Planning and Research Centre (NATPAC) who worked in close association with Dr. L.R. Kadiyali and Associates. This was a very innovative assignment and the contribution made by the Consultants is gratefully acknowledged, especially the inputs by Dr. L.R. Kadiyali himself.

5. I am sure the publication will prove useful and contribute to enhanced safety on the National Highways. The Ministry would welcome any comments and observations on the type designs, so that the publication can be improved in future.

(R.P. Sikka)
Addl. Director General (Roads)

New Delhi
9th November 1992

TABLE OF CONTENTS

FOREWORD	
TABLE OF CONTENTS	(i-iv)
GENERAL GUIDELINES FOR SELECTION OF APPROPRIATE TYPE DESIGNS FOR ROAD INTERSECTIONS.	(v)
APPENDIX I TO IV	(x)

TYPE DESIGNS

DRAWING NO.	DESCRIPTION OF DRAWING	PAGE NO.
1.	Cross Road Intersection of Four lane NH with NH/SH/Arterial in Urban/Semi-urban Area (Signalised)	1
2.	Cross Road Intersection of Four lane NH with NH/SH/Arterial in Urban/Semi-urban Area (Non-Signalised)	2
3.	T-Intersection involving a Four lane NH and a Four lane NH/SH	3
4.	Rotary Intersection involving two Four lane NH/SH in Urban/ Semi-urban area	4
5.	Rotary Intersection involving two Four lane NH/SH in Urban/ Semi-urban area	5
6.	Cross-road Intersection involving Four lane NH with a Two lane NH/SH	6
7.	T-Intersection involving Four lane NH and a Two lane NH/SH	7
8.	Y-Intersection involving Four lane NH and a Two lane NH/SH	8
9.	Rotary Intersection involving Four lane divided NH and Two lane NH/SH	9
10.	Cross Road Intersection involving Four lane NH with a Single lane SH/MDR	10
11.	T-Intersection involving a Four lane NH and a Single lane SH/MDR	11
12.	Y-Intersection involving Four lane NH and a Single lane SH/MDR	12
13.	Left/Right Staggered Intersection of a Four lane NH with a Single lane SH/MDR	13
14.	Right/Left Staggered Intersection of a Four lane NH with a Single lane SH/MDR	14

DRAWING NO.	DESCRIPTION OF DRAWING	PAGE NO.
15.	Layout for Rotary Intersection involving Four lane NH and Single lane SH	15
16.	Cross Road Intersection involving a Four lane NH and a lightly trafficked SH/MDR	16
17.	T-Intersection involving a Four lane NH and a lightly trafficked SH/MDR	17
18.	Y-Intersection involving a Four lane NH and a lightly trafficked SH/MDR	18
19.	Cross Road Intersection involving a Four lane NH and a Single lane ODR/VR	19
20.	T-Intersection involving a Four lane NH and Single lane ODR/VR	20
21.	Y-Intersection involving Four lane NH and a Single lane ODR/VR	21
22.	Cross road Intersection involving Two lane NH and a Two lane NH/SH	22
23.	T-Intersection involving a Two lane NH and a Two lane NH/SH	23
24.	Y-Intersection involving Two lane NH and a Two lane NH/SH	24
25.	Rotary Intersection involving Two lane NH with Two lane NH/SH	25
26.	Five-arm Rotary Intersection involving Two lane NH and a SH	26
27.	Cross Road Intersection involving a Two lane NH and a Single lane SH/MDR	27
28.	T-Intersection involving Two lane NH and a Single lane SH/MDR	28
29.	Y-Intersection involving Two lane NH and a Single lane SH/MDR	29
30.	Right/Left Staggered Intersection of a Two lane NH with a Single lane SH/MDR	30
31.	Cross Road Intersection of Two lane NH and lightly trafficked Single lane SH/MDR	31
32.	T-Intersection involving a Two lane NH and a lightly trafficked Single lane SH/MDR	32
33.	Y-Intersection involving Two lane NH and lightly trafficked SH/MDR	33
34.	Cross Road Intersection involving a Two lane NH and a Single lane ODR/VR	34

DRAWING NO.	DESCRIPTION OF DRAWING	PAGE NO.
35.	T-Intersection involving Two lane NH and a Single lane ODR/VR	35
36.	Y-Intersection involving Two lane NH and a Single lane ODR/VR	36
37.	Y-Intersection involving Four lane NH and a Single Lane NH	37
38.	Y-Intersection involving Single lane NH and a Two lane NH/SH	38
39.	Cross Road Intersection involving a Single lane NH and a lightly trafficked SH/MDR	39
40.	T-Intersection involving a Single lane NH and a lightly trafficked SH/MDR	40
41.	Y-Intersection involving Single lane NH and a lightly trafficked SH/MDR	41
42.	Cross Road Intersection involving a Single lane NH and lightly trafficked ODR/VR	42
43.	T-Intersection involving a Single lane NH and a lightly trafficked ODR/VR	43
44.	Y-Intersection involving a Single lane NH and a Single lane ODR/VR	44
45.	Details of Intersection at Bypass Take-off involving a Four-lane NH (30 degree Take-off angle) and Two lane road to City/Town	45
46.	Details of Intersection at Bypass Take-off involving a Four lane NH (30 degree Take-off angle) and Two lane road to City/Town	46
47.	Details of Intersection at Bypass Take-off involving a Four lane NH (45 degree Take-off angle) and Two lane road to City/Town	47
48.	Details of Intersection at Bypass Take off involving a Four lane NH (60 degree Take-off angle) and a Two lane road to City/Town	48
49.	Details of Intersection at Bypass Take-off involving a Four lane NH (30 degree Take-off angle) and a Two lane road to City/Town	49
50.	Details of Intersection at Bypass Take-off involving a Two lane NH (30 degree Take-off angle) and a Two lane City/ Town Road	50
51.	Lay out of a Diamond Interchange	51

DRAWING NO.	DESCRIPTION OF DRAWING	PAGE NO.
52.	Diamond Interchange - Details of 'X' referred in Drg No. 51	52
53.	Diamond Interchange - Details of 'Y' referred in Drg No. 51	53
54.	General layout of NH Fly-over with At-grade Four-armed Signalised Intersection	54
55.	Details of speed change lanes and Entry Points of Grade Separated Fly-over with At-grade Intersection	55
56.	General layout and Longitudinal profile/Cross-sections of Trumpet Interchange	56
57.	Trumpet Interchange - Details at X, Y and Z in Drawing No. 56 and Traffic Signs	57
58.	Layout of NH Fly-over with At-grade Rotary Intersection	58
59.	NH Fly-over with At-grade Rotary Intersection - Longitudinal profile, Cross-sections and Locations of Traffic Signs	59
60.	Road Signs	60
61.	Drawing showing Pavement Markings for Intersections	61
62.	Drawing showing Pavement Markings for Intersections	62
63.	Details of Directional Islands and kerbs	63
64.	Drainage Plan for the cross road intersection (Refer DRG No. 65 and 66 also)	64
65.	Drawing showing required Vertical Alignment and Cross Sections of Primary Road for Drainage of surface run-off	65
66.	Drawing showing required Vertical Alignment and Cross Sections of Secondary Road for Drainage of surface run-off	66
67.	Drainage Arrangements for a Rotary Intersection and Inlet Details	67

GENERAL GUIDELINES FOR SELECTION OF APPROPRIATE TYPE DESIGNS FOR ROAD INTERSECTIONS

1. GENERAL

1.1 Road intersection is a key element of Highway Design. Recognising the need to provide properly designed intersections on the National Highway System, type designs have been evolved for a wide variety of intersection types, road widths and traffic flows. The designs are illustrative in nature and can be fitted into most situations with minor modifications. Complicated intersections would, however, need to be specially designed and such cases must be tackled separately.

1.2 Designs presented are essentially for rural situations : however, these could also be applied to semi-urban situation. A few designs for urban locations have also been included.

2. SCOPE OF TYPE DESIGNS :

2.1 AT-GRADE INTERSECTIONS

The designs presented cover at-grade intersections of 4-lane/2-lane/single-lane National Highways (NH) with 4-lane/2-lane/single-lane intersecting roads which could be of the category of National Highway (NH), State Highway (SH), Major District Road (MDR), Other District Road (ODR) or Village Road (VR). Intersection types covered include T/Y intersections, 4-armed intersections and rotary. For skew 4-armed intersection the design could be modified on the basis of Y-intersection designs. The designs could also be used for the state roads with appropriate modifications.

2.2 GRADE SEPARATED INTERSECTIONS (INTERCHANGES)

Four types of interchanges have been covered viz. Diamond, Trumpet, At-grade rotary and At-grade controlled intersection with NH flying over.

2.3 CHOICE OF APPROPRIATE STANDARD DESIGN :

The choice of intersection design is governed essentially by traffic volume and the number of lanes on each of the intersecting roads and the angles of crossing. Tables in Appendix-I to IV gives a matrix of the various types of intersections presented which can be used as a guide to select the appropriate design (s) for a given situation.

Reference number of each drawing also indicates the situation to which a particular design pertains. For example, in the Drawing Number below,

NH 4 - SHMDR 1/9/X-3

NH 4 indicates that the main highway is a 4-lane National Highway and SHMDR 1 indicates that crossing highway is either a single-lane State Highway or a MDR and the Drawing in question is ninth in the series. X-3 indicates that the intersection is a square 4-armed crossing and it is third in the series of type designs for cross-road type of intersections.

3. DESIGN STANDARDS :

3.1 Designs are based generally on the IRC Draft standard for Design of At-Grade Intersections (under finalisation). Principal design elements adopted are summarised below.

3.2 TRAFFIC

Traffic figures wherever indicated are the average daily traffic (ADT) volume in PCUs at the end of the design period (generally 10 years). Peak hour traffic has been assumed as 8 per cent of ADT.

3.3 DESIGN VEHICLE

Designs developed are suitable for plying of single unit trucks/bus chassis and for semi-trailers upto wheel base of 12 m.

3.4 DESIGN SPEED

Design speed adopted for design of auxiliary lanes is 60 percent of the highway speed in open areas. However, turning speed for right angle turns at intersections is restricted to 20 Kmph and left turns to a maximum of 30 Kmph.

3.5 TURNING RADIUS

A minimum turning radius of 15 m has been adopted for right turns which will permit a turning speed of 20 Kmph. Maximum radius for left turns is 30 m which will permit a turning speed of 30 Kmph. However, for lower category of roads like Village Roads, a turning radius of 15 m has been adopted which will also hold good for any permitted access connections to adjacent properties. At junctions with greater proportion of left turning heavy vehicles, three-centred compound curves (45-15-45 m radius) have been used to reduce risk of vehicles swinging out of their lane and keeping paved area of the intersection to the minimum.

3.6 LANE WIDTH AND NUMBER OF LANES

A minimum lane width of 3.5 m has been provided. The number of lanes to be provided at the intersection will be governed by peak hour traffic volume in each direction of travel. For single lane movements, a minimum width of 5.5 m is adopted to enable vehicles to move past a stalled car. For two-lane roads between kerbs, a minimum 7.5 m width is provided. Maximum capacity of a lane is assumed to be 1200 PCU/HR. Widening of carriageway is achieved by a taper of not less than 1 in 15.

3.7 LENGTH OF AUXILIARY LANES

Three types of auxiliary lanes are provided at intersections. These are : right turn storage lanes, acceleration lanes and deceleration lanes. The length of these lanes is based on the estimated volume of traffic entering or leaving the main road andthe speed of travel on the main road and side road. Length of storage lane provided is 130 m (including 50 m taper).

Acceleration lane is provided when turning traffic from side road merging with NH traffic is more than 400 PCUs/h. The maximum total length of acceleration lane provided is 330 m (Including 80 m taper) which is suitable for 30 Kmph entrance curve speed and 75 Kmph highway speed. Deceleration lane is provided when turning traffic from NH is more than 300 PCUs/h. The maximum length of deceleration lane provided is 150 m (Including 80 m taper) which permits a 85 Kmph highway speed and 30 Kmph turning curve speed.

3.8 WIDTH OF MEDIAN ISLAND

A minimum width of 1.5 m has been adopted where these are introduced in the absence of a continuous median. Minimum length of median island is kept as 6 m. Maximum length will be determined by site requirements.

3.9 CHANNELISING ISLANDS

Channelising islands have been provided depending on the volume of turning traffic and importance of the road. The minimum size of directional island provided is 4.5 sq. m. The island is offset from normal vehicle path by 0.3 to 0.6 m. Where an island is provided, the intersection area is reduced by use of compound curves. The island shapes shown in the type designs have been checked with wheel path turning diagrams of design vehicles to ensure that they can negotiate the curve safely and clear off the island.

3.10 KERBS

All kerbs at central and directional islands are of semi-barrier type.

3.11 TRAFFIC CONTROL DEVICES

Road signs are provided as per IRC : 67-1977 and markings as per IRC : 35-1970 (Under Revision). Traffic singnals may be added if dictated by warrants given in IRC : 93-1986.

4. INTERSECTION TYPE AND SELECTED GEOMETRY

4.1 CROSS-INTERSECTIONS

In this type of intersection, treatment is given to prevent high speed crossing movements by limiting the crossing speed and by requiring the minor road traffic to

give way and allowing major road traffic to proceed through the intersection unimpeded. Different treatments of intersection areas have been developed to take care of the likely crossing road situations in rural areas. Situations covered vary from single lane NH carrying traffic less than 5000 PCUs/day and crossing Village Roads carrying traffic of only 1000 PCUs/day to 4 lane diveded NH interesecting another NH or SH of equal importance. Choice of intersection type will depend on layout of the particular site, traffic pattern, traffic volumes, the area available for improvement, topography, pedestrain movements and planned ultimate development of the road.

4.2 T-INTERSECTIONS AND Y-INTERSECTIONS

In this type of intersection, normally preference is assigned to the through road while traffic on the terminating road must give way. The angle of intersection as far as possible, is kept as 90 degrees but angles upto 60 degrees are permissible. At more acute crossings priority to traffic is not obvious, driver's visibility is restricted and undesirably high speeds turning are possible. Such intersecting arm is turned around to bring it to meet at an angle of 60 to 90 degrees. Flaring and treatment at intersection depends on the importance of terminating road and the volume of traffic on it. An appropriate design can be selected on this basis.

4.3 ROTARY

Roundabouts are appropriate treatment for an intersection where the proportion of right turning traffic is high and the total traffic volume is beyond the capacity of an un-signalised intersection and self regulated traffic flow and low speed of operation are desirable. Different type of designs to suit each type of location are tabulated in Appendix 1.

4.4 STAGGERED T-INTERSECTIONS

This type of treatment is suitable where capacity is not a problem and intersecting roads differ in priority. This treatment prevents high speed crossing movements and prevents cross-accidents which are common in higher speed areas. Appropriate typical designs suited to site conditions have been envolved.

4.5 BYPASS ENDS

Bypasses generally take off at an acute angle on a large radius curve from the existing NH leading to the bypassed town/city. At such locations, it is desirable to give priority to traffic on the bypass by turning the existing road to meet the bypass in a "T" or "Y" - Intersection at an angle of 60 to 75 degrees. Typical design to suit local conditions may be selected from the six type designs presented (Refer Appendix II).

5.0 DESIGN STANDARDS FOR GRADE SEPARATORS

5.1 DESIGN SPEEDS

The speed of main roads in the grade seperators has been taken as 100 Kmph. Loop ramps are designed for a speed of 50 Kmph and straigth exit and entry ramps for a speed of 65 Kmph.

5.2 GRADIENT

The maximum rising and falling gradients are kept as 2 percent.

5.3 WIDTH OF SLIP ROADS/RAMPS

Minimum width of ramp is kept as 3.75 m with 2.0 m shoulder on left side and 1.5 m shoulder on right side. Width of the ramp can, however, be varied depending on traffic volumes. Barrier railing is to be provided on ramps as required.

5.4 VERTICAL CLEARANCE

5 m vertical clearance is provided at grade separators:

5.5 ACCELERATION AND DECELERATION LANES (SPEED CHANGE LANES)

Full length of acceleration and deceleration lanes are provided depending on the exit/entry speeds and the design speed of highway. These have a minimum paved width of 3.5 m.

5.6 HORIZONTAL CURVES AND SUPERELEVATION

Horizontal curves are designed for the appropriate speed and superelevated accordingly. Transitions at the ends of circular curves are provided for smooth change of direction in accordance with the normal geometric standards.

5.7 VERTICAL CURVES

Vertical curves are provided according to normal geometric standards at all changes of gradient.

5.8 WEAVING LENGTH

To reduce weaving, diverging points are provided before the merging points and extra weaving lanes are provided depending on the volume of weaving traffic and length of weave section.

5.9 TRAFFIC CONTROL DEVICES

Traffic signs are provided in the grade seperator as per details indicated in the relevant type drawings. Road markings are provided as per IRC : 35-1970 (under revision) and as per details indicated in the drawings.

5.10 STRUCTURAL DIMENSIONS

The structural dimensions indicated are purely for illustrative purposes. Specific details will have to be worked out in individual cases.

5.11 Four types of interchange designs covered are listed in Appendix III.

6.0 GENERAL DRAWINGS

6.1 General drawings pertaining to traffic signs, road markings, islands and drainage are listed in Appensix IV.

APPENDIX I

BASIC
MATRIX FOR INTERSECTION TYPE DESIGNS AND THE CORRESPONDING DRAWING NUMBER

MAIN ROAD		INTERSECTING ROAD				
NH		NH/SH 4 lane Traffic 15,000 PCUs/ Day and Above	NH/SH 2-lane Traffic 5000-15000 PCUs/Day	SH/MDR Single-lane Traffic : 2500-5000 PCUs/Day	SH/MDR Single-lane Traffic : 1000-2500 PCUs/Day	ODR/VR Single-lane Traffic : Lane Less than 1000 PCUs/Day
1	Four-lane Traffic Above 15,000 PCUs/Day	1 Cross Road Signalised (NH4-NHSH4/1/X-1) 2. Cross road non—signalised (NH4-NHSH4/2/X-2 3. T-Intersection (NH4-NHSH4/3/T-1) 4 Rotary 1 (NH4-NHSH 4/4/R-1) 5 Rotary - 2 (NH4-NHSH4/5/R-2)	6. Cross Road (NH4-NHSH2/6/X-3) 7. T-Intersection (NH4-NHSH2/7/T-2) 8. Y-Intersection (NH 4-NHSH 2/8/Y-1) 9 Rotary (NH 4-NHSH 2/9/R-3)	10. Cross Road (NH4-SHMDR 1/10/X-4) 11. T-Intersection (NH4-SHMDR 1/11/T-3) 12. Y-Intersection (NH4-SHMDR 1/12/Y-2) 13. Left/Right Stagger (NH4-SHMDR 1/13/S-1) 14. Right/Left Stagger (NH4-SHMDR1/14/S-2) 15. Rotary (3 ARM) (NH 4-SHMDR 1/15/R-4)	16. Cross Road (NH4-SHMDR 1/16/X-5) 17. T-Intersection (NH4-SHMDR 1/17/T-4) 18. Y-Intersection (NH4-SHMDR 1/18/Y-3)	19. Cross Road (NH4-ODRVR 1/19/X-6) 20. T-Intersection (NH4-ODRVR 1/20/T-5) 21. Y-Intersection (NH4-ODRVR 1/21/Y-4)
2	Two-lane Traffic 5000 - 15,000 PCUs/Day		22 Cross Road (NH2-NHSH2/22/X-7) 23. T Intersection (NH2-NHSH2/23/T-6) 24 Y-Intersection (NH-2-NHSH2/24/Y-5) 25 Rotary (4 ARM) (NH2-NHSH2/25/R-5) 26 Rotary (5 ARM) (NH2-NHSH 2/26/R-6)	27 Cross road (NH2-SHMDR1/27/X-8) 28. T-Intersection (NH2-SHMDR 1/28/T-7) 29 Y-Intersection (NH2-SHMDR1/29/Y-6) 30. Right-Left Stagger (NH2-SHMDR 1/30/S-3)	31. Cross road (NH2-SHMDR 1/31/X-9) 32. T-Intersection (NH2-SHMDR 1/32/T-8) 33. Y-Intersection (NH2-SHMDR 1/33/Y-7)	34. Cross Road (NH2-ODRVR 1/34/X-10) 35. T-Intersection (NH2-ODRVR 1/35/T-9) 36. Y-Intersection (NH2-ODRVR 1/36/Y-8)
3	Single-lane Traffic Less Than 5000 PCUs Day	37 Y-Intersection (NH1-NHSH 4/37/Y-9)	38. Y-Intersection (NH 1-NHSH2/38/Y-10)		39. Cross Road (NH1-SHMDR 1/39/X-11) 40. T-Intersection (NH2-SHMDR 1/40/T-10) 41. Y-Intersection (NH1-SHMDR 1/41/Y-11)	42. Cross Road (NH2-ODRVR 1/42/X-12) 43. T-Intersection (NH1-0ODRVR1/43/T-11) 44 Y-Intersection (NH1-ODRVR 1/44/Y-12)

APPENDIX II

DESIGNS FOR TREATMENT OF BYPASS ENDS AND DRAWING NUMBERS

S. NO.	TYPE OF BYPASS :	Anle at which the Bypass takes off from. Existing Alignment	Angle at which the turned old N.H. arm from the city meets the Bypass.	Drawing No.
A.	**Bypass four lanes**			
1)	Start of Bypass	30°	75°	NH 4-CR2/45/B-1
2)	Start of Bypass	30°	60°	NH 4-CR2/46/B-2
3)	Start of Bypass	45°	75°	NH 4-CR2/47/B-3
4)	Start of Bypass	60°	75°	NH 4-CR2/48/B-4
5)	End of Bypass	30°	75°	NH 4-CR2/49/B-5
B.	**Bypass two lanes**			
6)	Start of Bypass	30°	75°	NH 2-CR2/50/B-6

APPENDIX III

DESIGNS FOR INTERCHANGES AND DRAWING NUMBERS

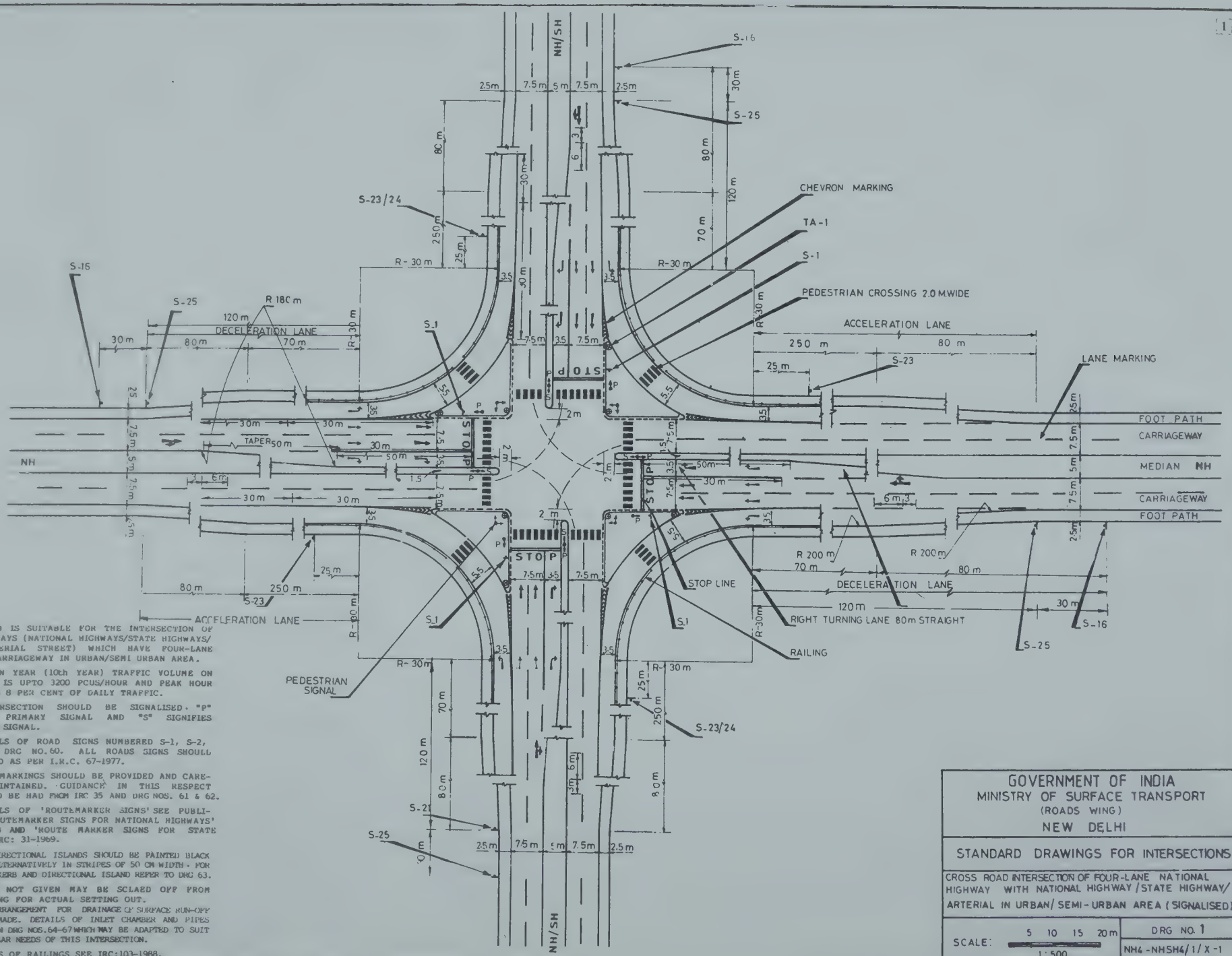
S. No.	Type of Interchanges	Drawing No.
51 to 53	Diamond	NH4SH4/DI/51/1 NH4SH4/DI/52/2 NH4SH4/DI/53
54 to 55	Fly-Over with Four-arm signalised at-grade intersection	NH4SH4/F/54 NH4SH4/F/55/2
56 to 57	Trumpet	NH4SH4/TI/56 NH4SH4/TI/57/2
58 to 59	Fly-Over with at-grade rotary	NH4SH4/RI/58 NH4SH4/RI/59/2

APPENDIX IV

GENERAL DRAWINGS

60	Traffic Signs	G-1/60
61 to 62	Road markings	G-2/61/1 G-2/62/2
63	Islands	G-3/63
64 to 67	Drainage Details	G-4/64/1 G-4/65/2 G-4/66/3 G-4/67/4

TYPE DESIGNS



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF TWO HIGHWAYS (NATIONAL HIGHWAYS/STATE HIGHWAYS/ CITY ARTERIAL STREET) WHICH HAVE FOUR-LANE DIVIDED CARRIAGEWAY IN URBAN/SEMI URBAN AREA.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM IS UPTO 3200 PCUS/HOUR AND PEAK HOUR THAFFIC IS 8 PER CENT OF DAILY TRAFFIC.
3. THE INTERSECTION SHOULD BE SIGNALISED. "P" SIGNIFIES PRIMARY SIGNAL AND "S" SIGNIFIES SECONDARY SIGNAL.
4. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 & 62.
6. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
7. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
8. DIMENSIONS NOT GIVEN MAY BE SCLAED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
9. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE. DETAILS OF INLET CHAMBER AND PIPES ARE GIVEN IN DRG NOS. 64-67 WHICH MAY BE ADAPTED TO SUIT THE PARTICULAR NEEDS OF THIS INTERSECTION.
10. FOR DETAILS OF RAILINGS SEE IRC:103-1988.

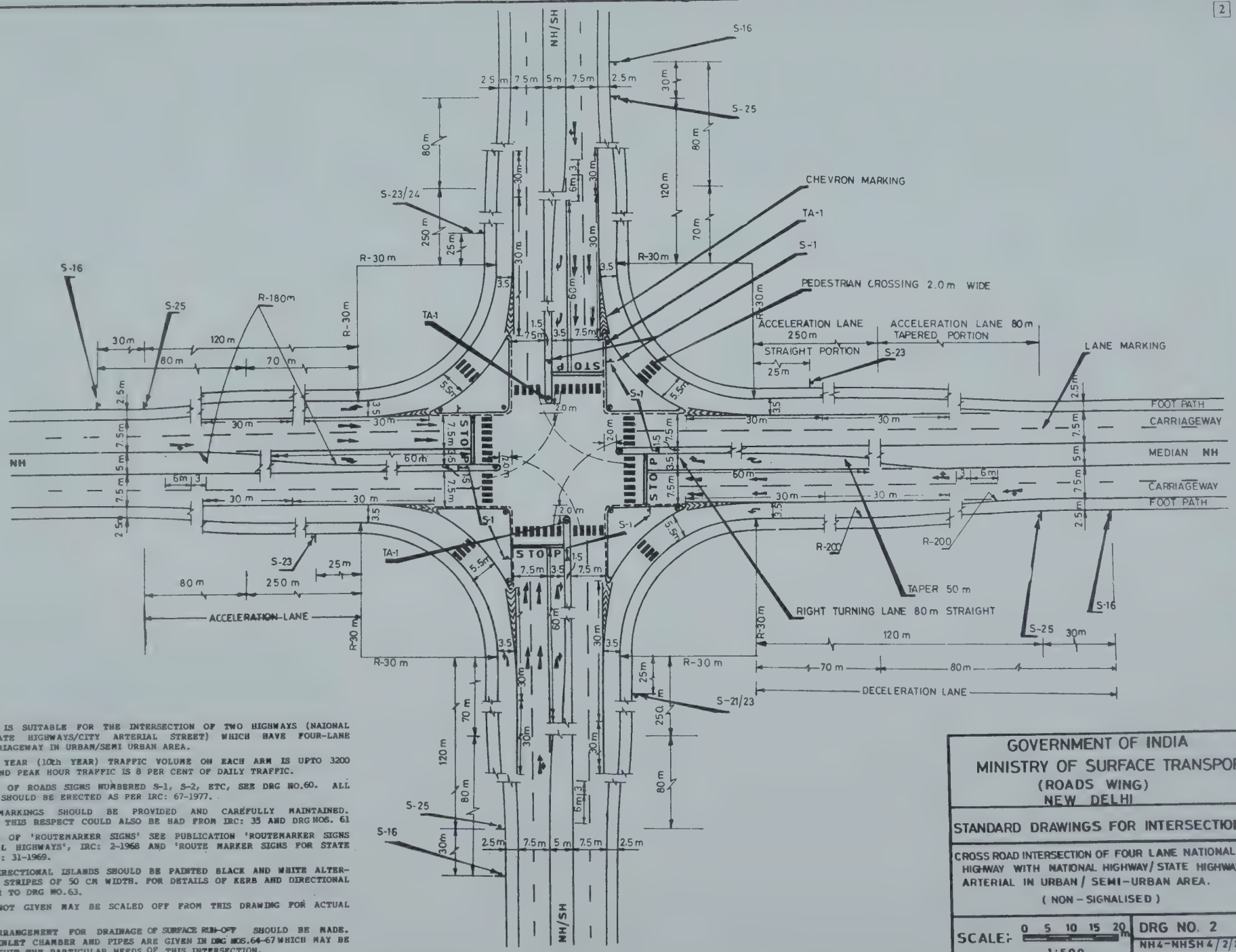
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION OF FOUR-LANE NATIONAL HIGHWAY WITH NATIONAL HIGHWAY / STATE HIGHWAY/ ARTERIAL IN URBAN/ SEMI-URBAN AREA (SIGNALISED)

SCALE: 5 10 15 20 m
1 : 500

DRG NO. 1
NH4 -NHSH4/ 1/ X -1



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3. FOR DETAILS OF ROADS SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS', IRC: 2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO.63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE. DETAILS OF INLET CHAMBER AND PIPES ARE GIVEN IN DRG NOS.64-67 WHICH MAY BE ADAPTED TO SUIT THE PARTICULAR NEEDS OF THIS INTERSECTION.

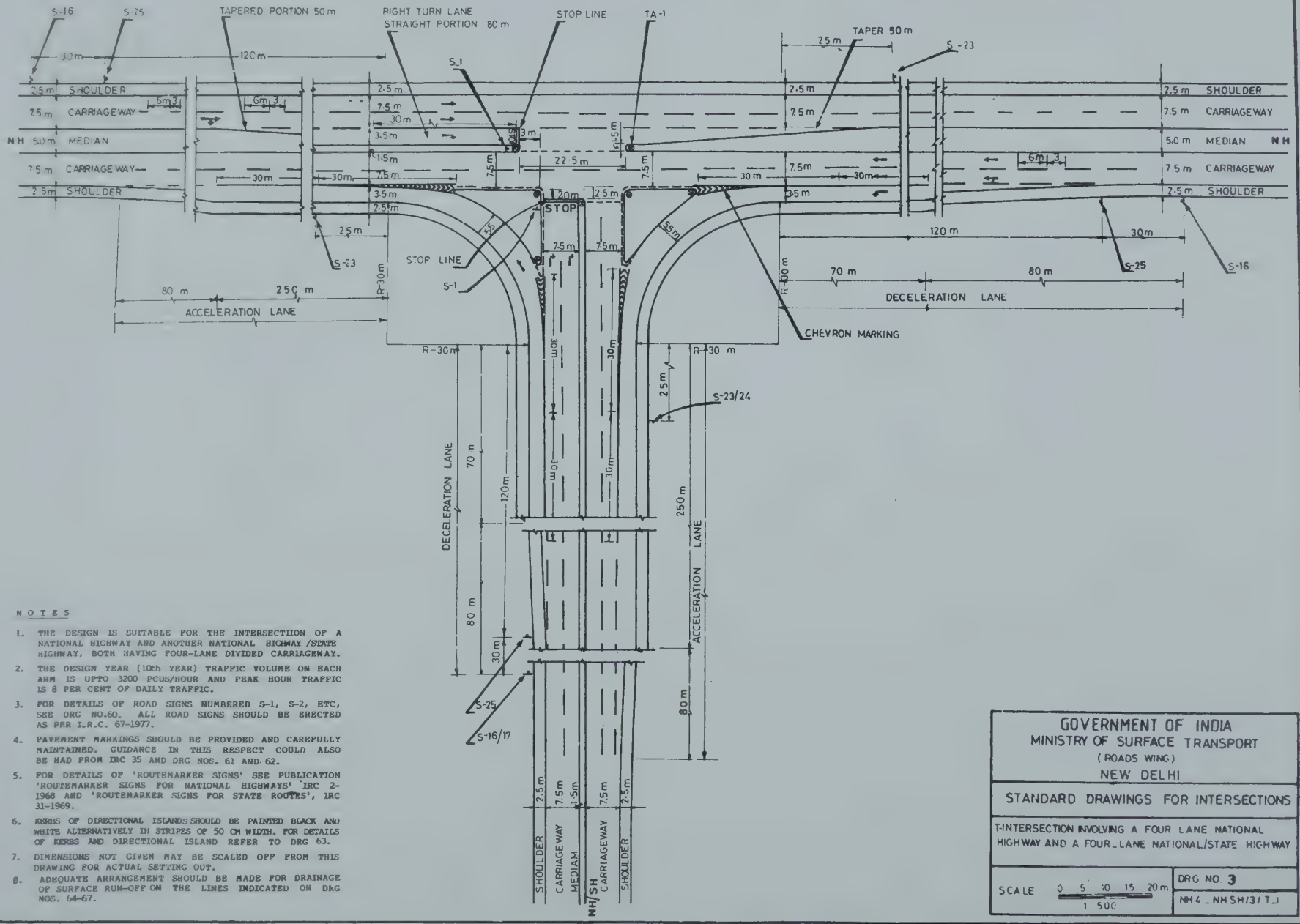
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION OF FOUR LANE NATIONAL HIGHWAY WITH NATIONAL HIGHWAY/ STATE HIGHWAY/ ARTERIAL IN URBAN / SEMI-URBAN AREA.
(NON - SIGNALISED)

SCALE: 0 5 10 15 20 m
1:500

DRG NO. 2
NH4-NHSH 4/2/X-2



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A NATIONAL HIGHWAY AND ANOTHER NATIONAL HIGHWAY /STATE HIGHWAY, BOTH HAVING FOUR-LANE DIVIDED CARRIAGEWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM IS UPTO 3200 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', IRC 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

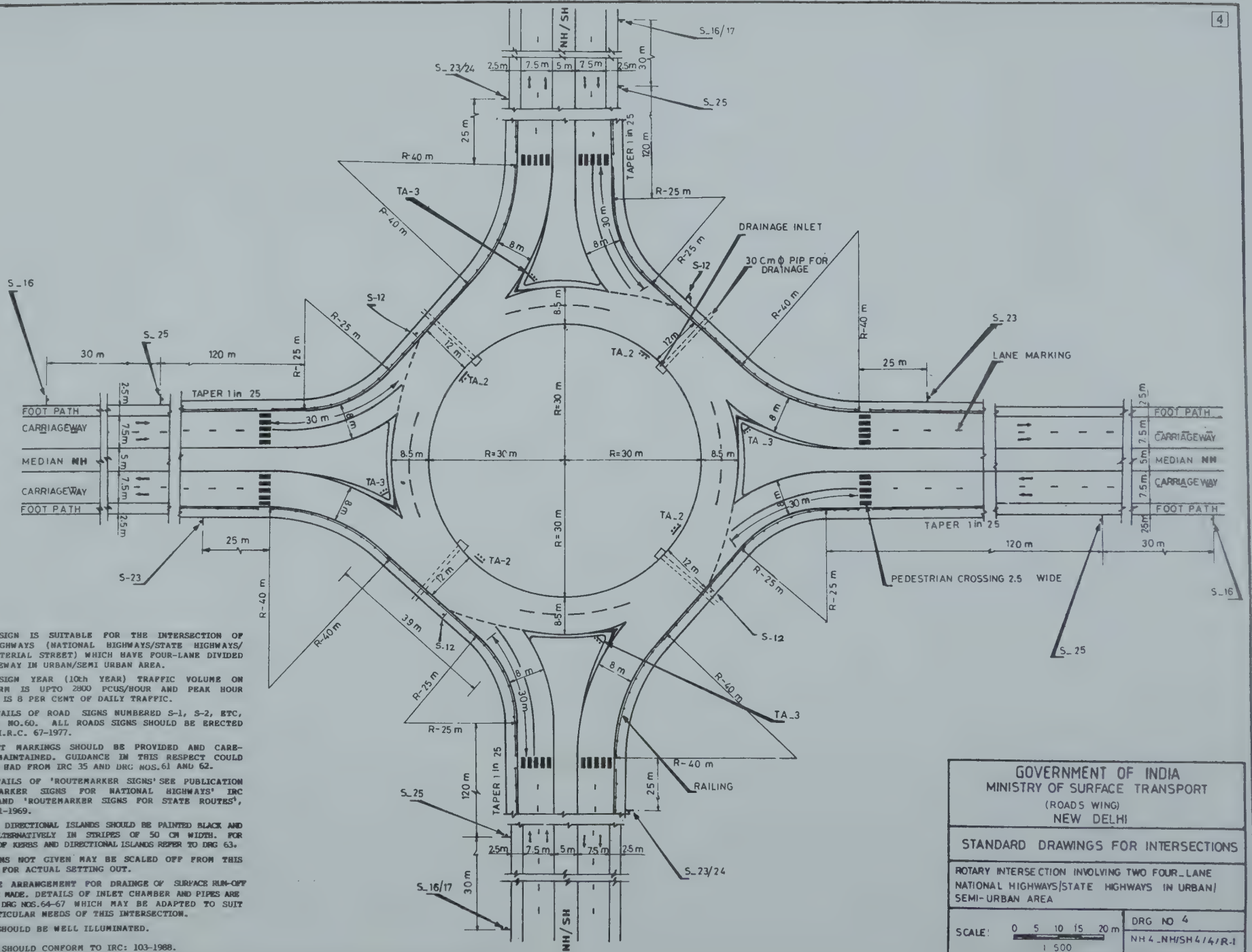
STANDARD DRAWINGS FOR INTERSECTIONS

T-INTERSECTION INVOLVING A FOUR LANE NATIONAL HIGHWAY AND A FOUR-LANE NATIONAL/STATE HIGHWAY

SCALE 0 5 10 15 20 m
1 500

DRG NO. 3

NH 4 - NH SH/3/ T_1



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF TWO HIGHWAYS (NATIONAL HIGHWAYS/STATE HIGHWAYS/ CITY ARTERIAL STREET) WHICH HAVE FOUR-LANE DIVIDED CARRIAGEWAY IN URBAN/SEMI URBAN AREA.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM IS UPTO 2800 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS.61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', I.R.C. 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLANDS REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINGE OF SURFACE RUN-OFF SHOULD BE MADE. DETAILS OF INLET CHAMBER AND PIPES ARE GIVEN IN DRG NOS.64-67 WHICH MAY BE ADAPTED TO SUIT THE PARTICULAR NEEDS OF THIS INTERSECTION.
9. ROTARY SHOULD BE WELL ILLUMINATED.
10. RAILINGS SHOULD CONFORM TO IRC: 103-1988.

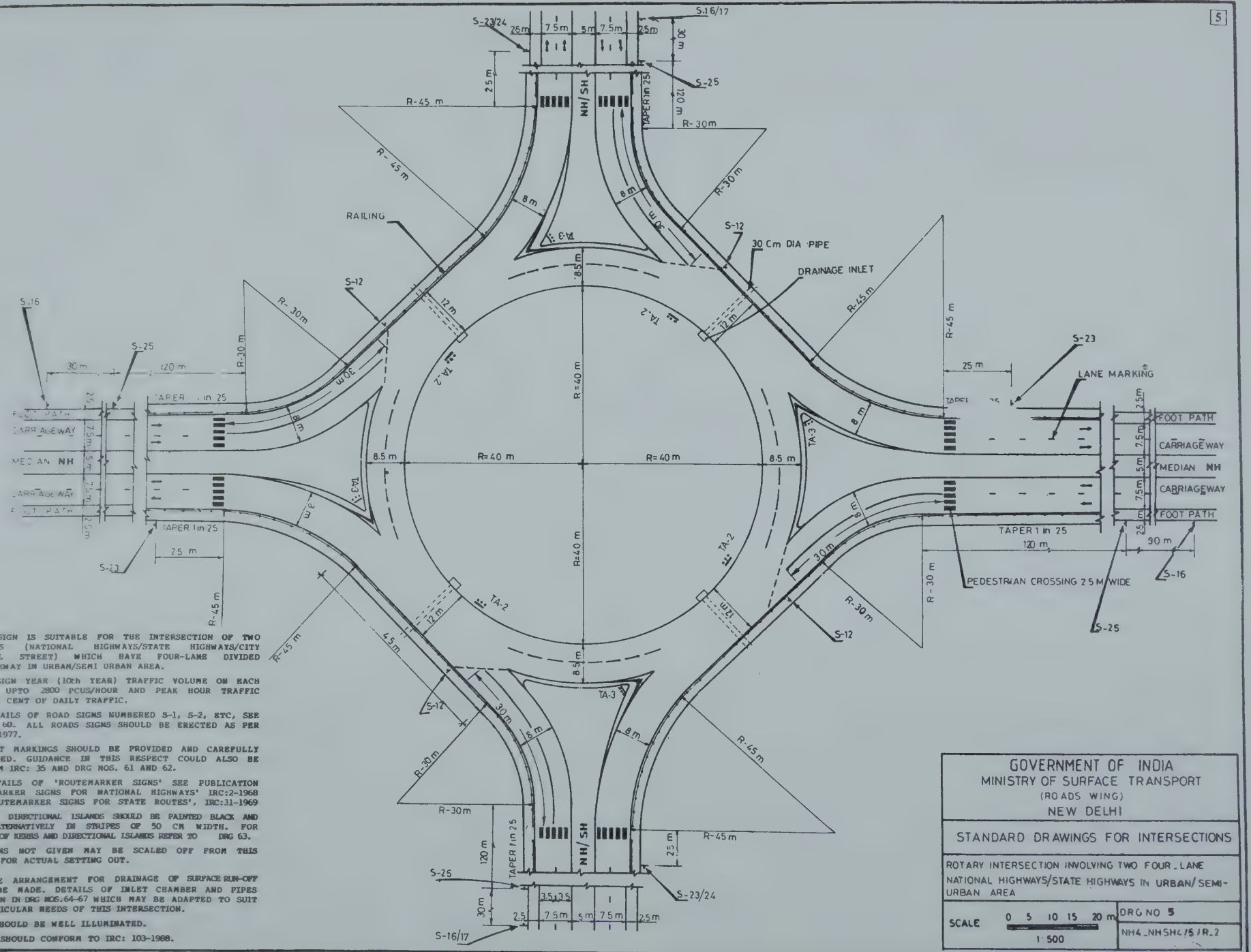
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

ROTARY INTERSECTION INVOLVING TWO FOUR-LANE NATIONAL HIGHWAYS/STATE HIGHWAYS IN URBAN/ SEMI-URBAN AREA

SCALE: 0 5 10 15 20 m
1 500

DRG NO 4
NH 4 _NH/SH 4/4/R-1



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF TWO HIGHWAYS (NATIONAL HIGHWAYS/STATE HIGHWAYS/CITY ARTERIAL STREET) WHICH HAVE FOUR-LANE DIVIDED CARRIAGEWAY IN URBAN/SEMI URBAN AREA.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM IS UPTO 2800 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC:2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', IRC:31-1969
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLANDS REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE. DETAILS OF INLET CHAMBER AND PIPES ARE GIVEN IN DRG NOS. 64-67 WHICH MAY BE ADAPTED TO SUIT THE PARTICULAR NEEDS OF THIS INTERSECTION.
9. ROTARY SHOULD BE WELL ILLUMINATED.
10. RAILINGS SHOULD CONFORM TO IRC: 103-1988.

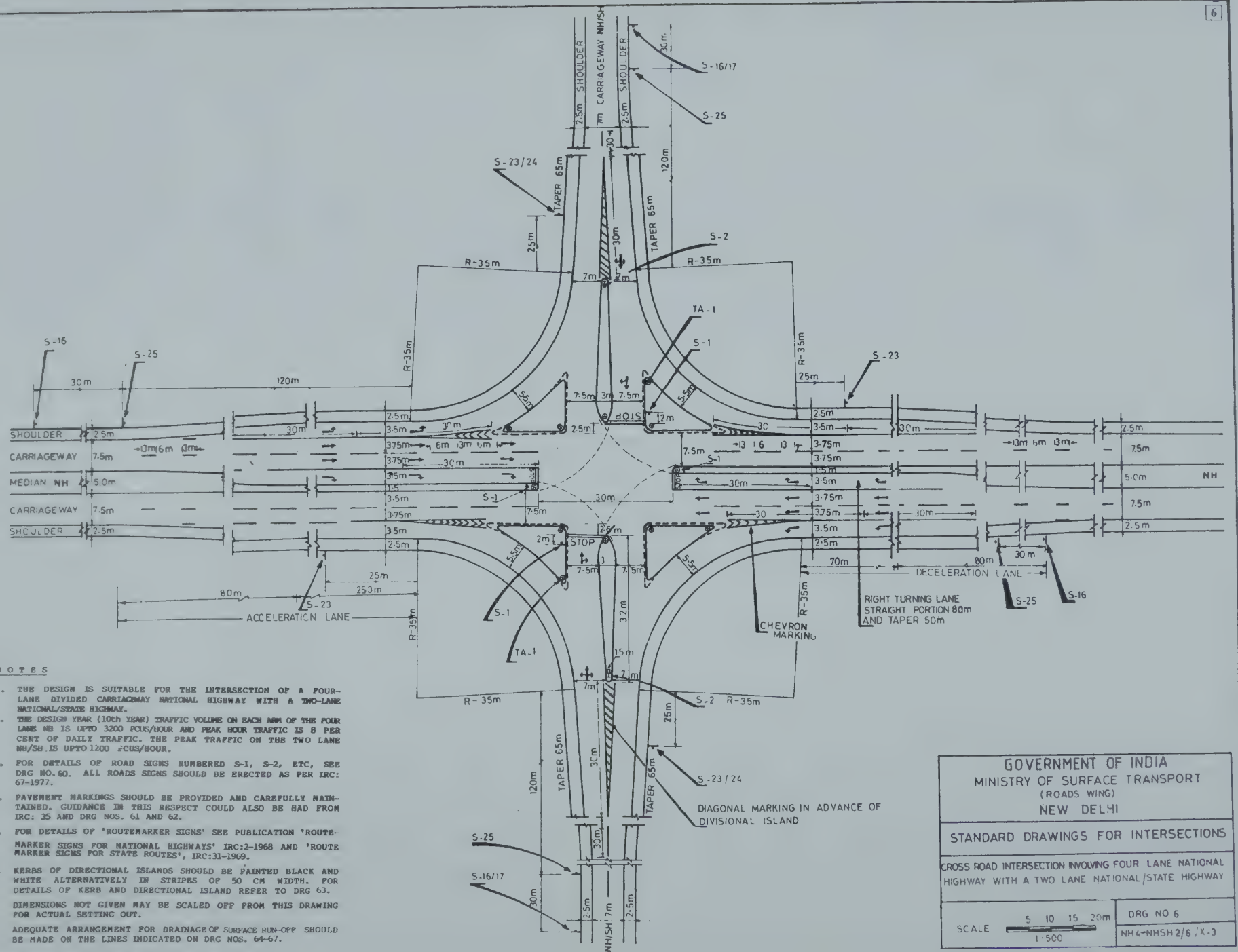
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

ROTARY INTERSECTION INVOLVING TWO FOUR-LANE NATIONAL HIGHWAYS/STATE HIGHWAYS IN URBAN/SEMI-URBAN AREA

SCALE 0 5 10 15 20 m
1:500

DRG NO 5
NH4_NHSH4/5/R_2



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY WITH A TWO-LANE NATIONAL/STATE HIGHWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM OF THE FOUR LANE NH IS UPTO 3200 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC. THE PEAK TRAFFIC ON THE TWO LANE NH/SH IS UPTO 1200 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE-MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC:2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC:31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

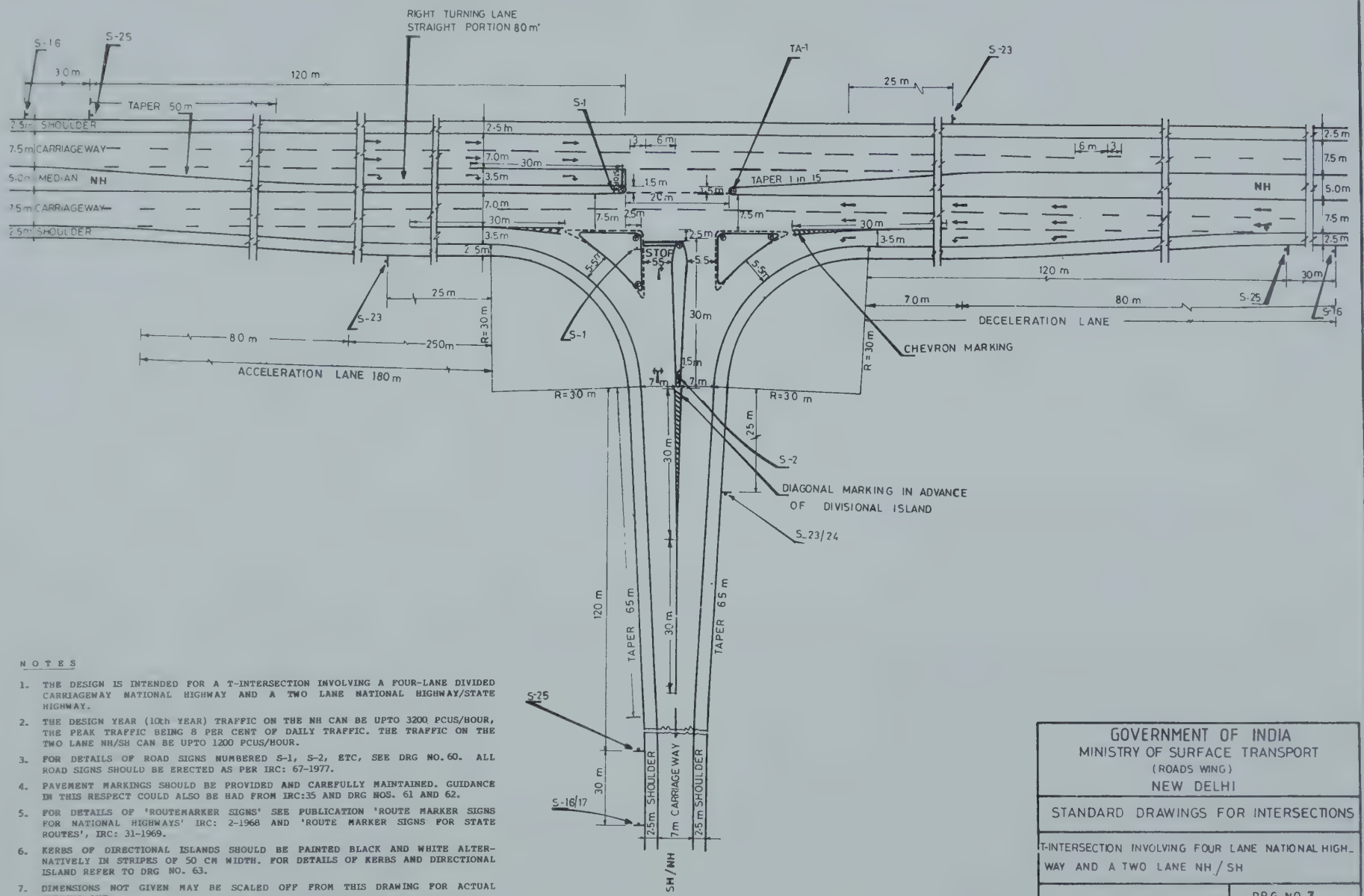
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION INVOLVING FOUR LANE NATIONAL HIGHWAY WITH A TWO LANE NATIONAL/STATE HIGHWAY

SCALE 5 10 15 20m
1:500

DRG NO 6
NH4-NHSH 2/6 /X-3



NOTES

1. THE DESIGN IS INTENDED FOR A T-INTERSECTION INVOLVING A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY AND A TWO LANE NATIONAL HIGHWAY/STATE HIGHWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH CAN BE UPTO 3200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE TWO LANE NH/SH CAN BE UPTO 1200 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC:35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC: 2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

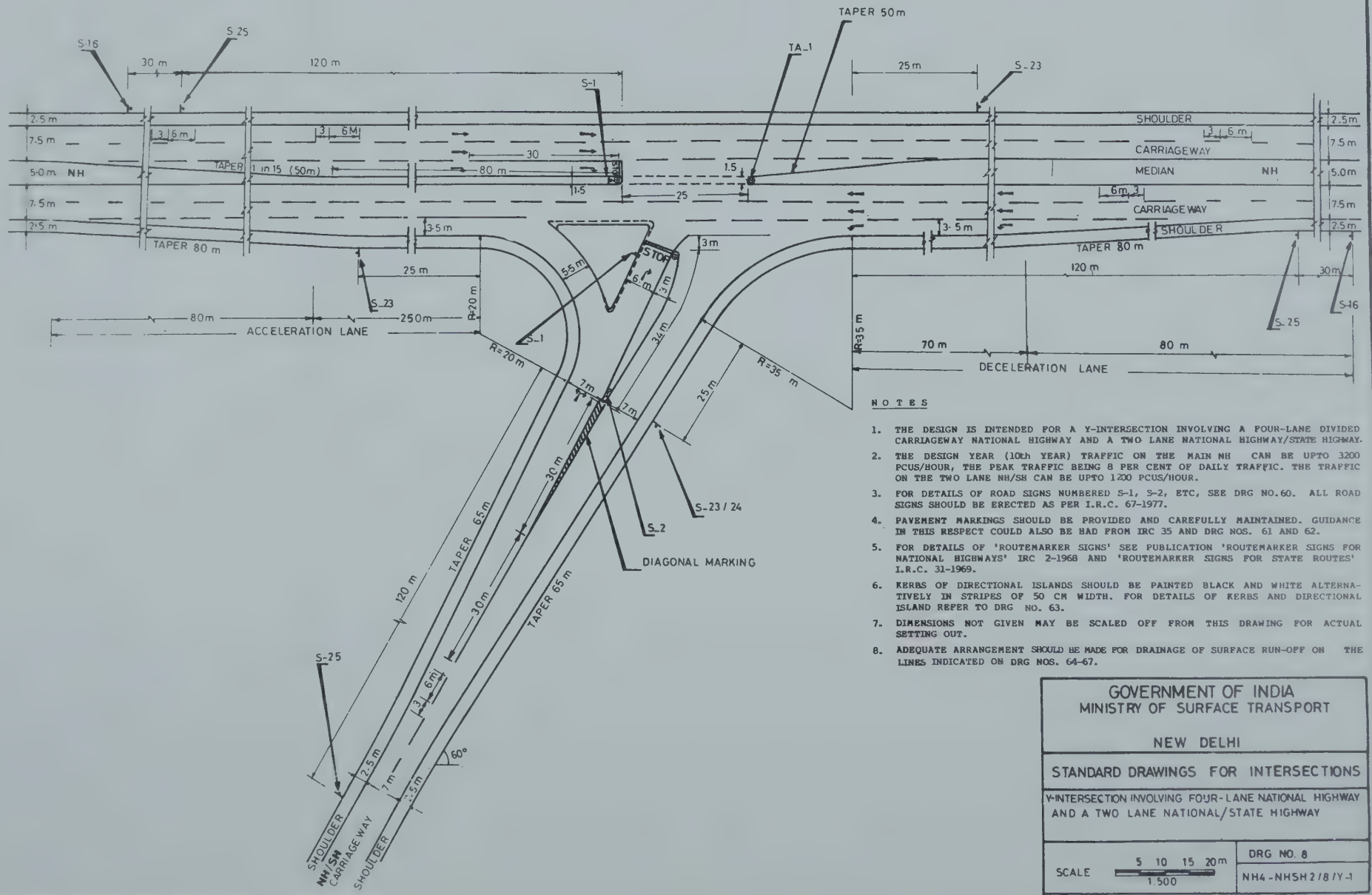
STANDARD DRAWINGS FOR INTERSECTIONS

T-INTERSECTION INVOLVING FOUR LANE NATIONAL HIGHWAY AND A TWO LANE NH / SH

SCALE.. 0 5 10 15 20m
1:500

DRG NO 7

NH 4-NH SH 2/7 /T-2



NOTES

1. THE DESIGN IS INTENDED FOR A Y-INTERSECTION INVOLVING A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY AND A TWO LANE NATIONAL HIGHWAY/STATE HIGHWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE MAIN NH CAN BE UPTO 3200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE TWO LANE NH/SH CAN BE UPTO 1200 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES' I.R.C. 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT

NEW DELHI

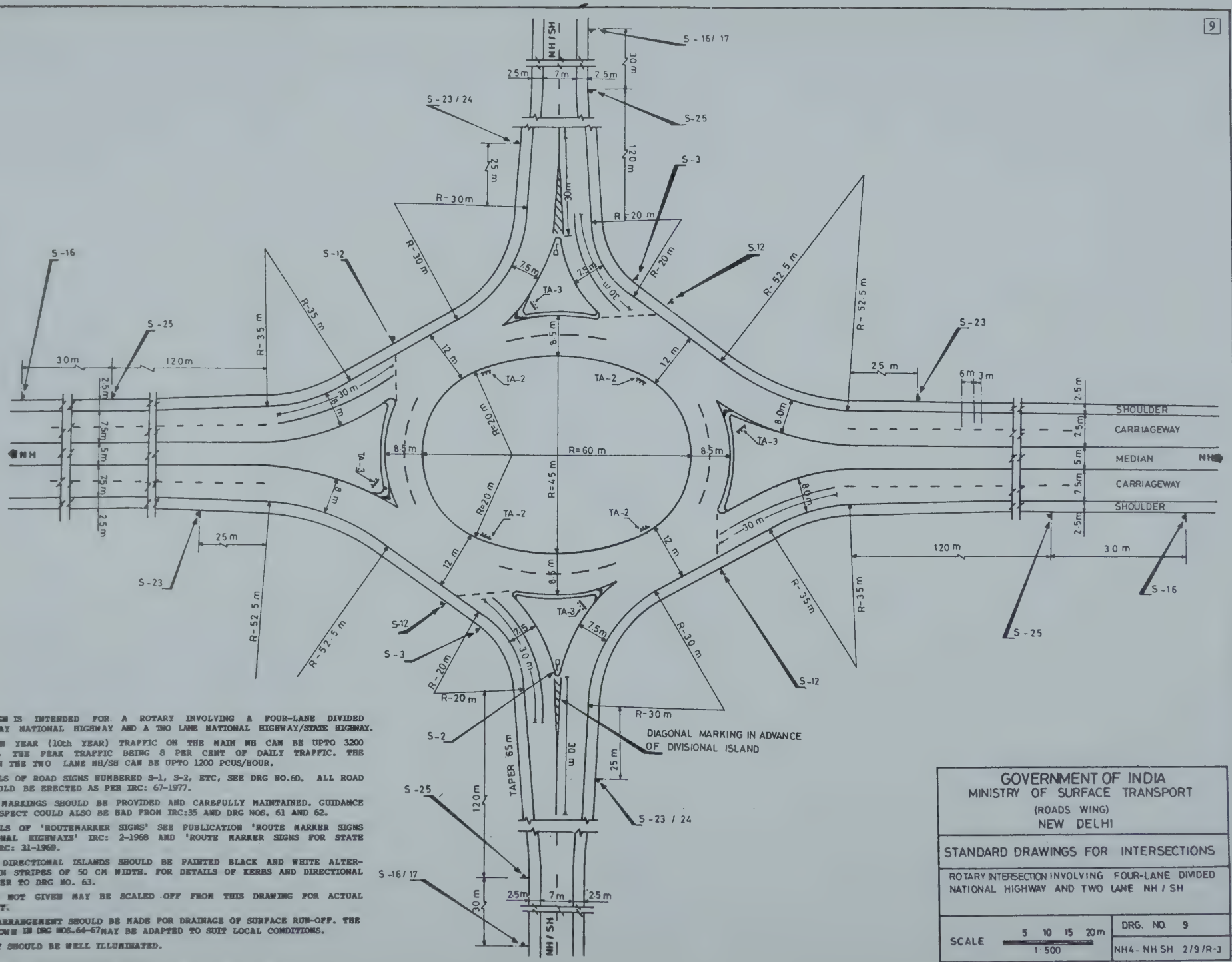
STANDARD DRAWINGS FOR INTERSECTIONS

Y-INTERSECTION INVOLVING FOUR-LANE NATIONAL HIGHWAY AND A TWO LANE NATIONAL/STATE HIGHWAY

SCALE 5 10 15 20m
1:500

DRG NO. 8

NH4-NHSH 2/8/Y-1



NOTES

1. THE DESIGN IS INTENDED FOR A ROTARY INVOLVING A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY AND A TWO LANE NATIONAL HIGHWAY/STATE HIGHWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE MAIN NH CAN BE UPTO 3200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE TWO LANE NH/SH CAN BE UPTO 1200 PCUS/HOUR.
3. THE DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC:35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC: 2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF. THE DETAILS SHOWN IN DRG NOS.64-67 MAY BE ADAPTED TO SUIT LOCAL CONDITIONS.
9. THE ROTARY SHOULD BE WELL ILLUMINATED.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

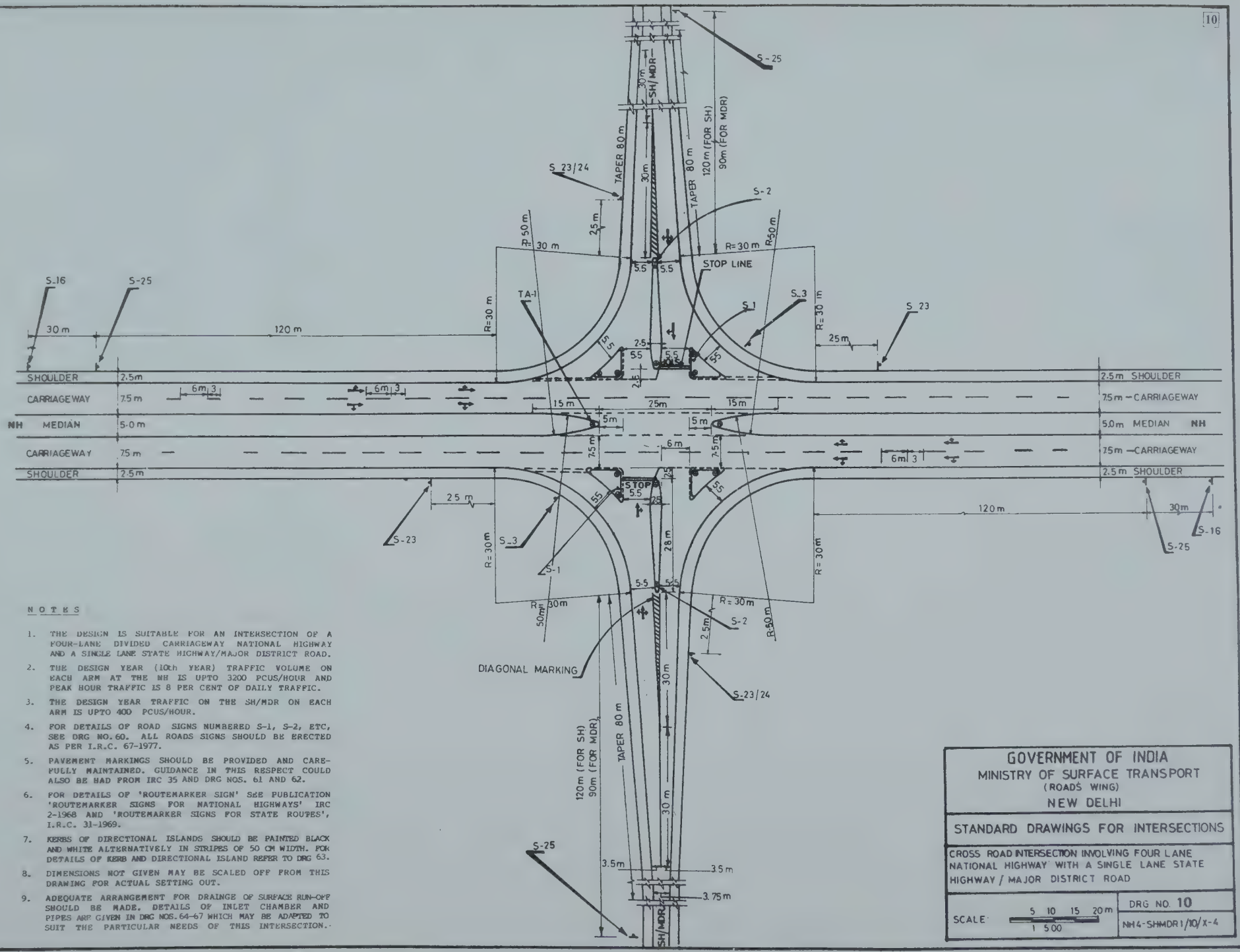
STANDARD DRAWINGS FOR INTERSECTIONS

ROTARY INTERSECTION INVOLVING FOUR-LANE DIVIDED NATIONAL HIGHWAY AND TWO LANE NH / SH

SCALE 5 10 15 20m
1:500

DRG. NO. 9

NH4 - NH SH 2/9/R-3



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM AT THE NH IS UPTO 3200 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC.
3. THE DESIGN YEAR TRAFFIC ON THE SH/MDR ON EACH ARM IS UPTO 400 PCUS/HOUR.
4. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
6. FOR DETAILS OF 'ROUTEMARKER SIGN' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', I.R.C. 31-1969.
7. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
8. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
9. ADEQUATE ARRANGEMENT FOR DRAINGE OF SURFACE RUN-OFF SHOULD BE MADE. DETAILS OF INLET CHAMBER AND PIPES ARE GIVEN IN DRG NOS. 64-67 WHICH MAY BE ADAPTED TO SUIT THE PARTICULAR NEEDS OF THIS INTERSECTION.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

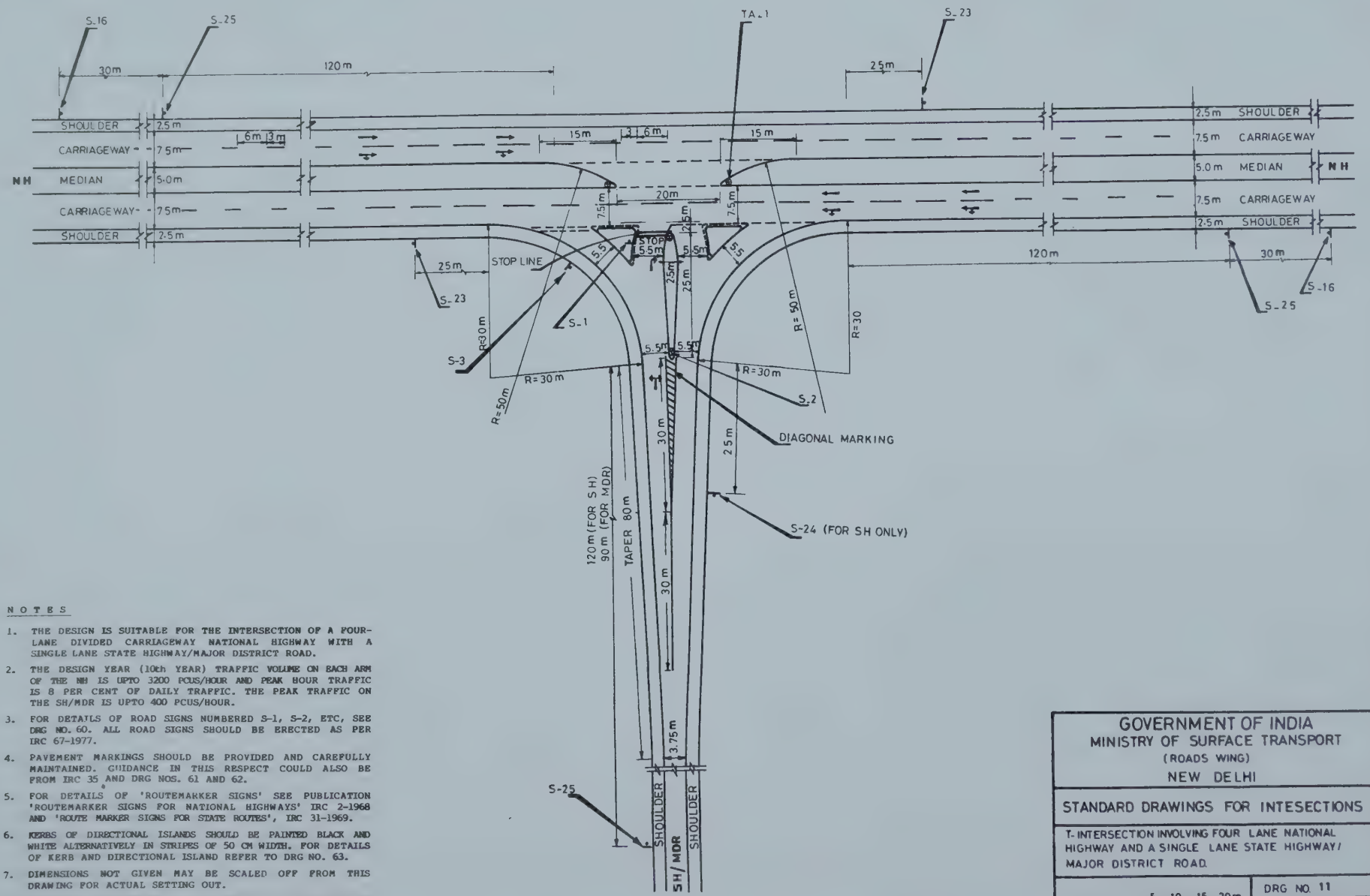
STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION INVOLVING FOUR LANE NATIONAL HIGHWAY WITH A SINGLE LANE STATE HIGHWAY / MAJOR DISTRICT ROAD

SCALE: 5 10 15 20m
1 500

DRG NO. 10

NH4-SHMDR1/10/X-4



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY WITH A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM OF THE NH IS UPTO 3200 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC. THE PEAK TRAFFIC ON THE SH/MDR IS UPTO 400 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS.64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

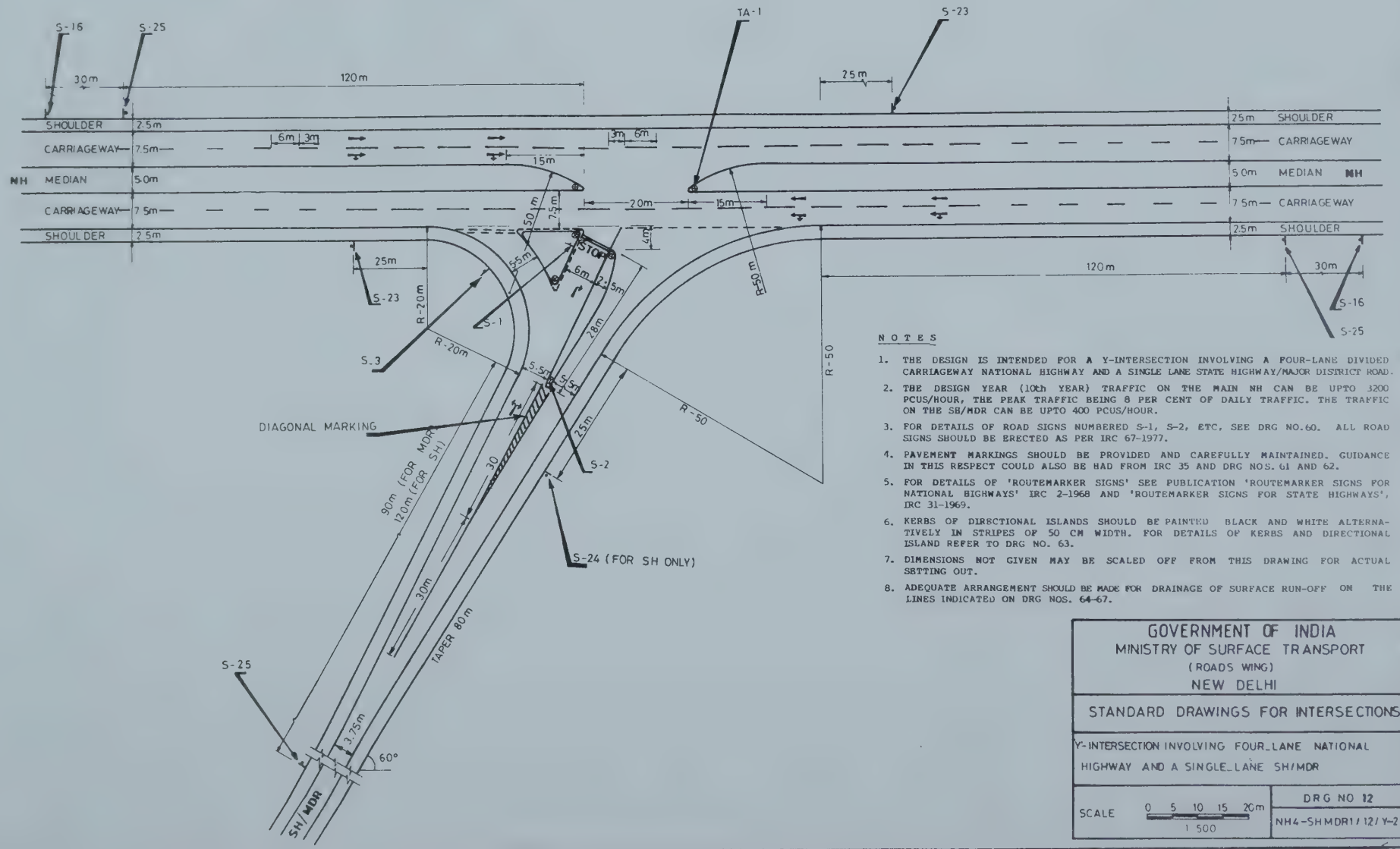
STANDARD DRAWINGS FOR INTESECTIONS

T- INTERSECTION INVOLVING FOUR LANE NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/ MAJOR DISTRICT ROAD.

SCALE 5 10 15 20m
1:500

DRG NO. 11

NH4-SHMDR 1/11/T-3



NOTES

1. THE DESIGN IS INTENDED FOR A Y-INTERSECTION INVOLVING A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE MAIN NH CAN BE UPTO 3200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE SH/MDR CAN BE UPTO 400 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE HIGHWAYS', IRC 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

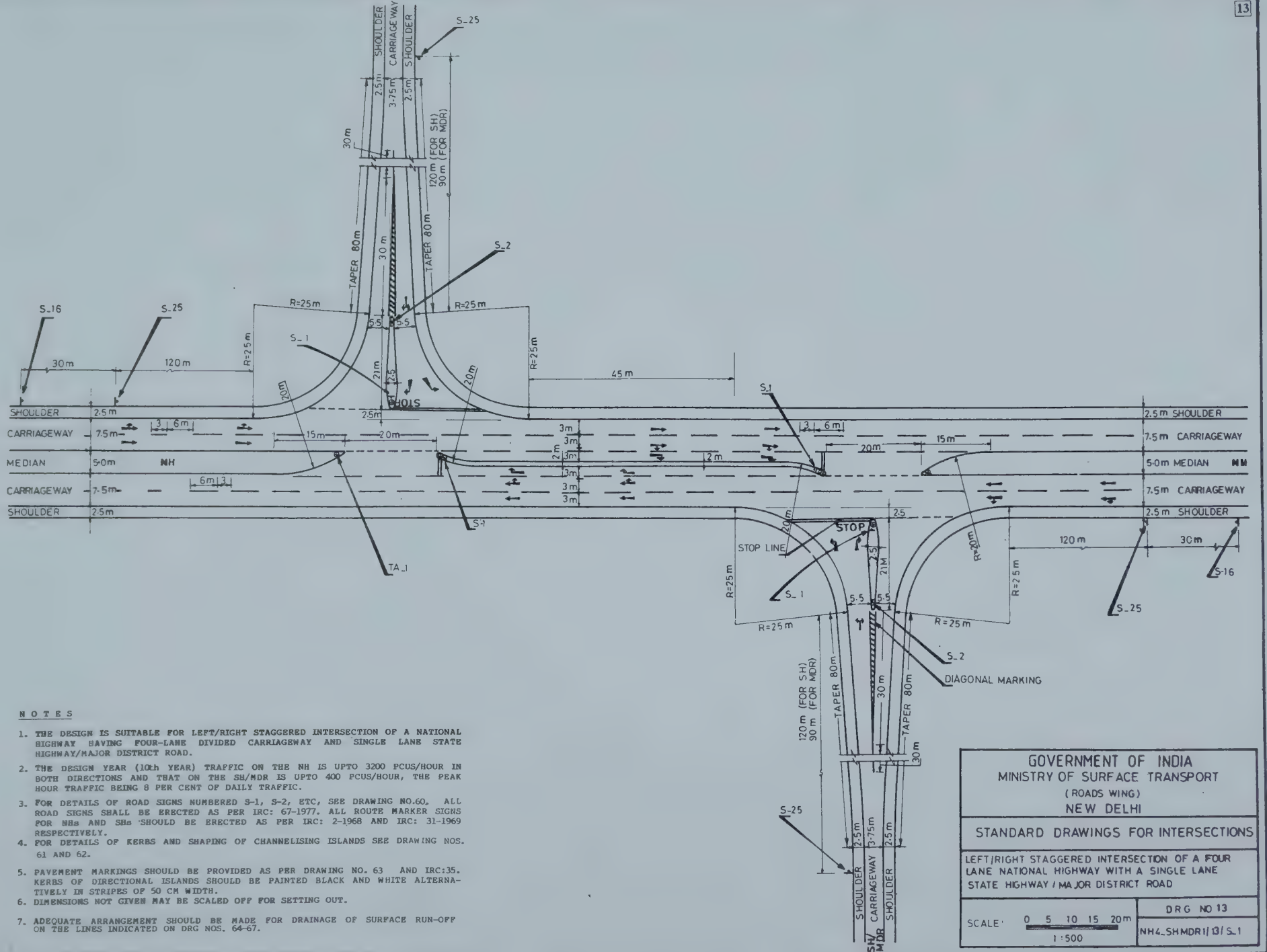
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

Y-INTERSECTION INVOLVING FOUR-LANE NATIONAL HIGHWAY AND A SINGLE-LANE SH/MDR

SCALE 0 5 10 15 20m
1 500

DRG NO 12
NH4-SHMDR1/12/Y-2



NOTES

1. THE DESIGN IS SUITABLE FOR LEFT/RIGHT STAGGERED INTERSECTION OF A NATIONAL HIGHWAY HAVING FOUR-LANE DIVIDED CARRIAGEWAY AND SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 3200 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE SH/MDR IS UPTO 400 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC: 67-1977. ALL ROUTE MARKER SIGNS FOR NHs AND SHs SHOULD BE ERECTED AS PER IRC: 2-1968 AND IRC: 31-1969 RESPECTIVELY.
4. FOR DETAILS OF KERBS AND SHAPING OF CHANNELISING ISLANDS SEE DRAWING NOS. 61 AND 62.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRAWING NO. 63 AND IRC:35. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
7. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

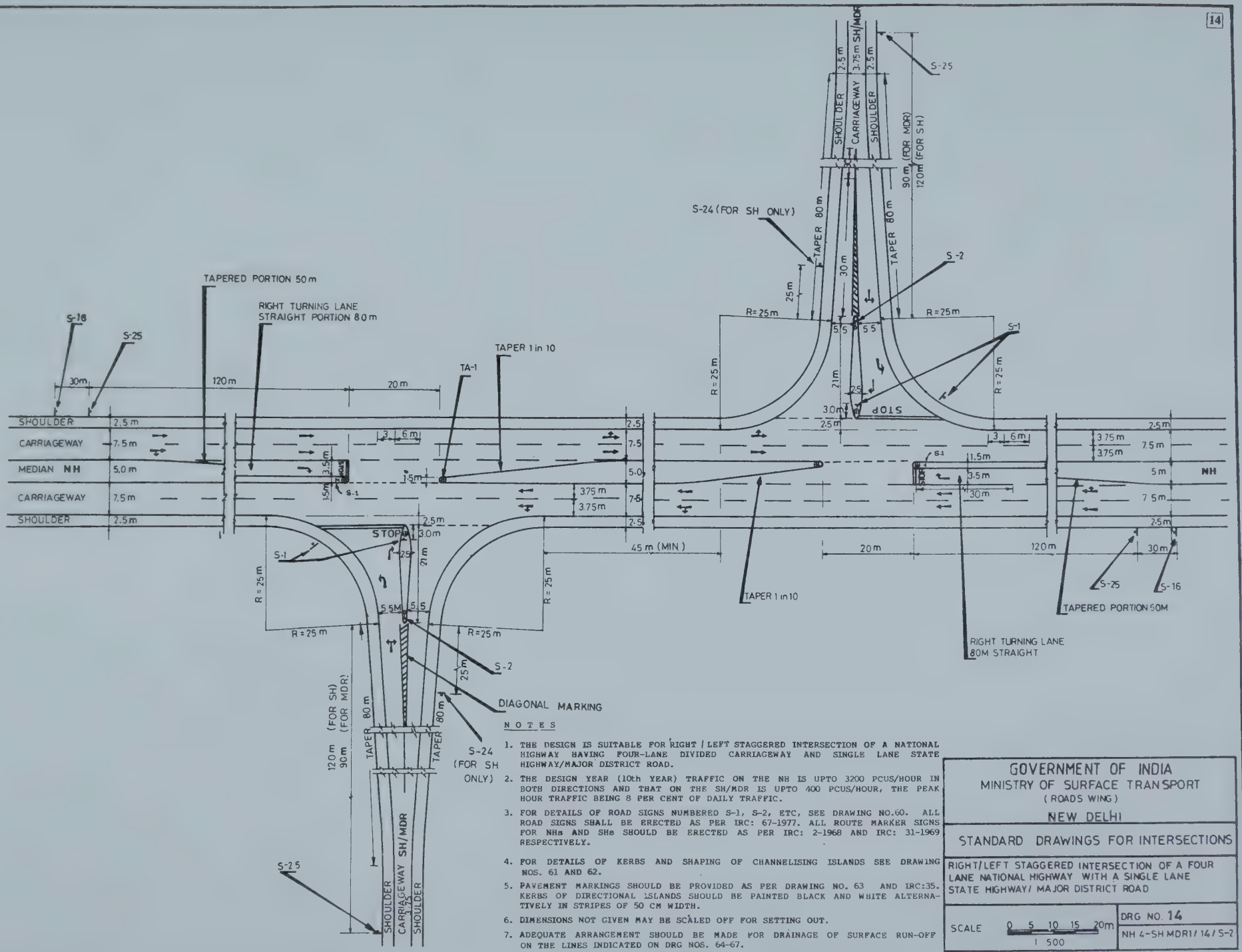
STANDARD DRAWINGS FOR INTERSECTIONS

LEFT/RIGHT STAGGERED INTERSECTION OF A FOUR LANE NATIONAL HIGHWAY WITH A SINGLE LANE STATE HIGHWAY / MAJOR DISTRICT ROAD

SCALE: 0 5 10 15 20m
1:500

DRG NO 13

NH4_SHMDR1/13/S_1



NOTES

1. THE DESIGN IS SUITABLE FOR RIGHT / LEFT STAGGERED INTERSECTION OF A NATIONAL HIGHWAY HAVING FOUR-LANE DIVIDED CARRIAGEWAY AND SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 3200 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE SH/MDR IS UPTO 400 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC: 67-1977. ALL ROUTE MARKER SIGNS FOR NHs AND SHs SHOULD BE ERECTED AS PER IRC: 2-1968 AND IRC: 31-1969 RESPECTIVELY.
4. FOR DETAILS OF KERBS AND SHAPING OF CHANNELISING ISLANDS SEE DRAWING NOS. 61 AND 62.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRAWING NO. 63 AND IRC:35. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
7. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

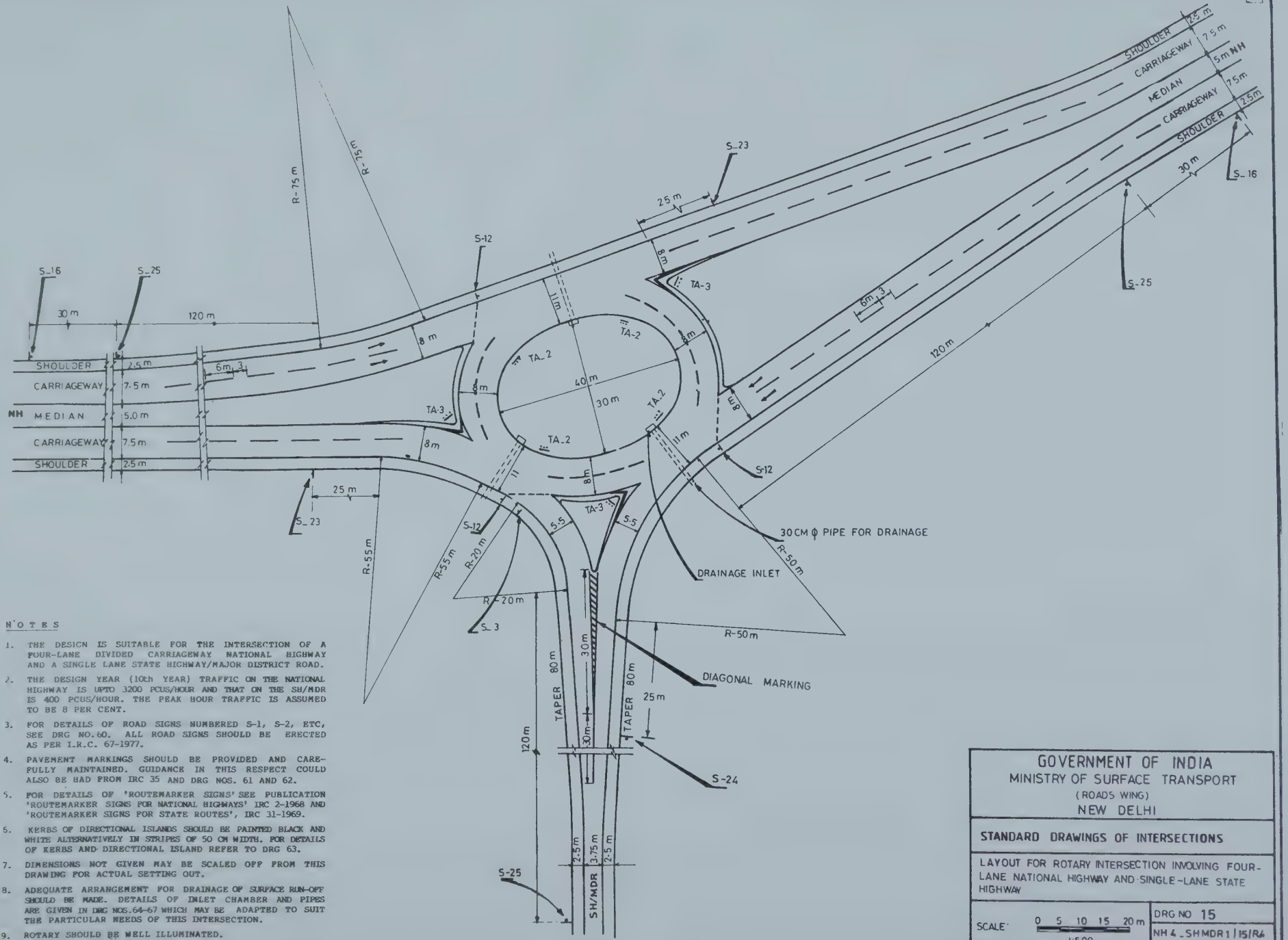
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

RIGHT/LEFT STAGGERED INTERSECTION OF A FOUR LANE NATIONAL HIGHWAY WITH A SINGLE LANE STATE HIGHWAY/ MAJOR DISTRICT ROAD

SCALE 0 5 10 15 20m
1 500

DRG NO. 14
NH 4-SH MDR1/ 14/ S-2



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NATIONAL HIGHWAY IS UPTO 3200 PCUS/HOUR AND THAT ON THE SH/MDR IS 400 PCUS/HOUR. THE PEAK HOUR TRAFFIC IS ASSUMED TO BE 8 PER CENT.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', IRC 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE. DETAILS OF INLET CHAMBER AND PIPES ARE GIVEN IN DRG NOS.64-67 WHICH MAY BE ADAPTED TO SUIT THE PARTICULAR NEEDS OF THIS INTERSECTION.
9. ROTARY SHOULD BE WELL ILLUMINATED.

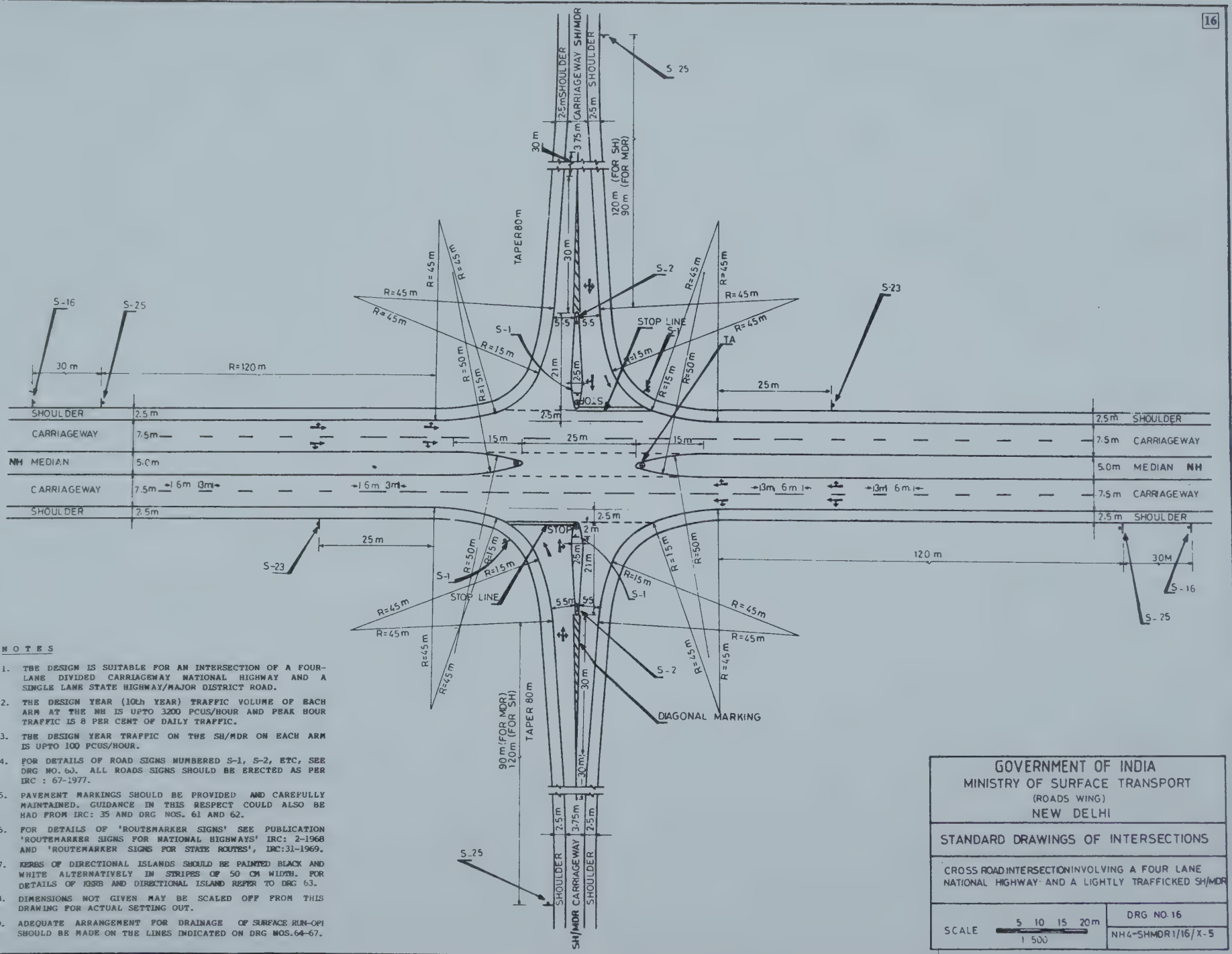
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS OF INTERSECTIONS

LAYOUT FOR ROTARY INTERSECTION INVOLVING FOUR-LANE NATIONAL HIGHWAY AND SINGLE-LANE STATE HIGHWAY

SCALE: 0 5 10 15 20 m
1:500

DRG NO 15
NH 4_SH MDR 1/15/R4



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME OF EACH ARM AT THE NH IS UPTO 3200 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC.
3. THE DESIGN YEAR TRAFFIC ON THE SH/MDR ON EACH ARM IS UPTO 100 PCUS/HOUR.
4. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER IRC : 67-1977.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61 AND 62.
6. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC: 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', IRC:31-1969.
7. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
8. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
9. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

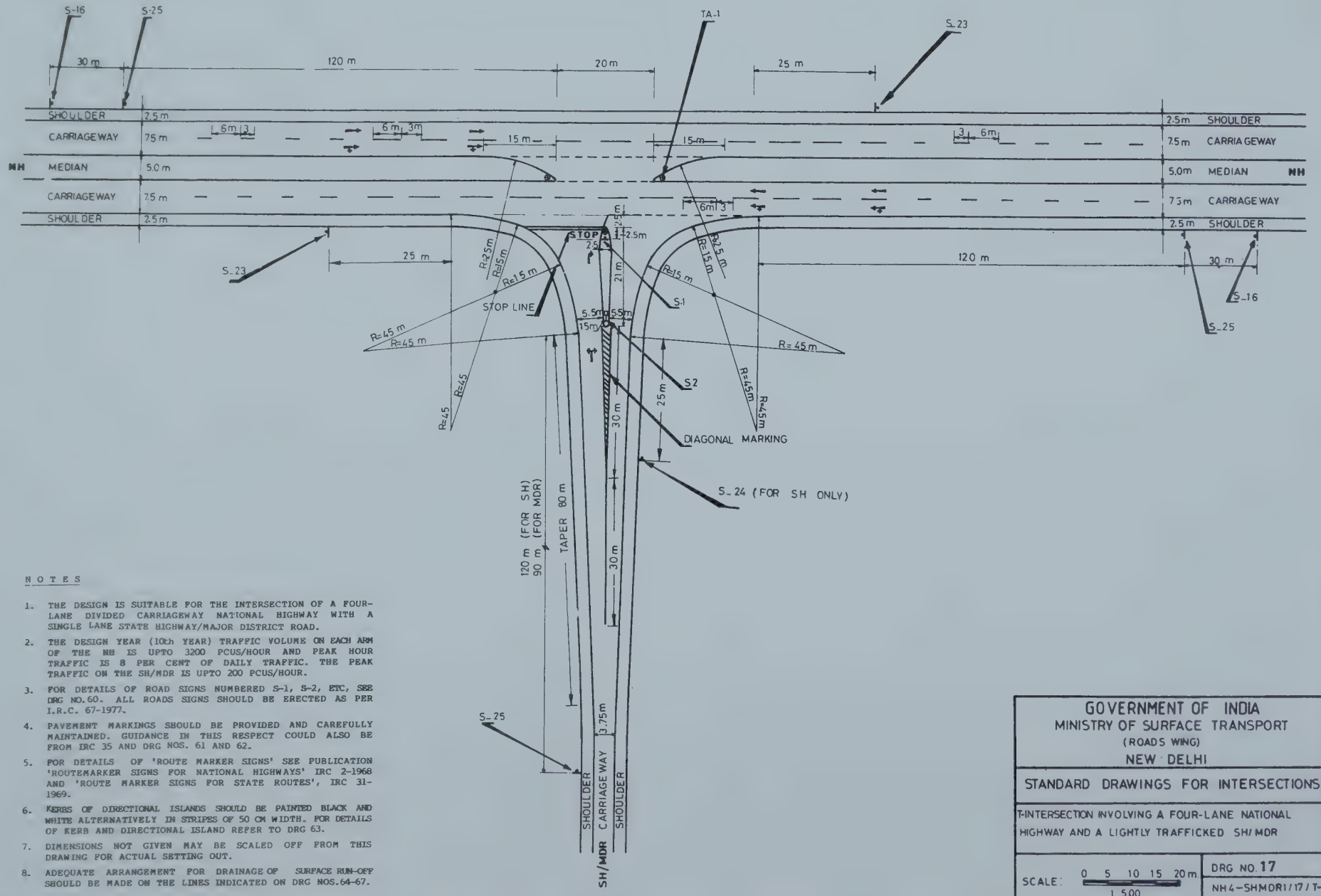
STANDARD DRAWINGS OF INTERSECTIONS

CROSS ROAD INTERSECTION INVOLVING A FOUR LANE NATIONAL HIGHWAY AND A LIGHTLY TRAFFICKED SH/MDR

SCALE 5 10 15 20m
1 500

DRG NO. 16

NH4-SHMDR 1/16/X-5



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY WITH A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM OF THE NH IS UPTO 3200 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC. THE PEAK TRAFFIC ON THE SH/MDR IS UPTO 200 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTE MARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

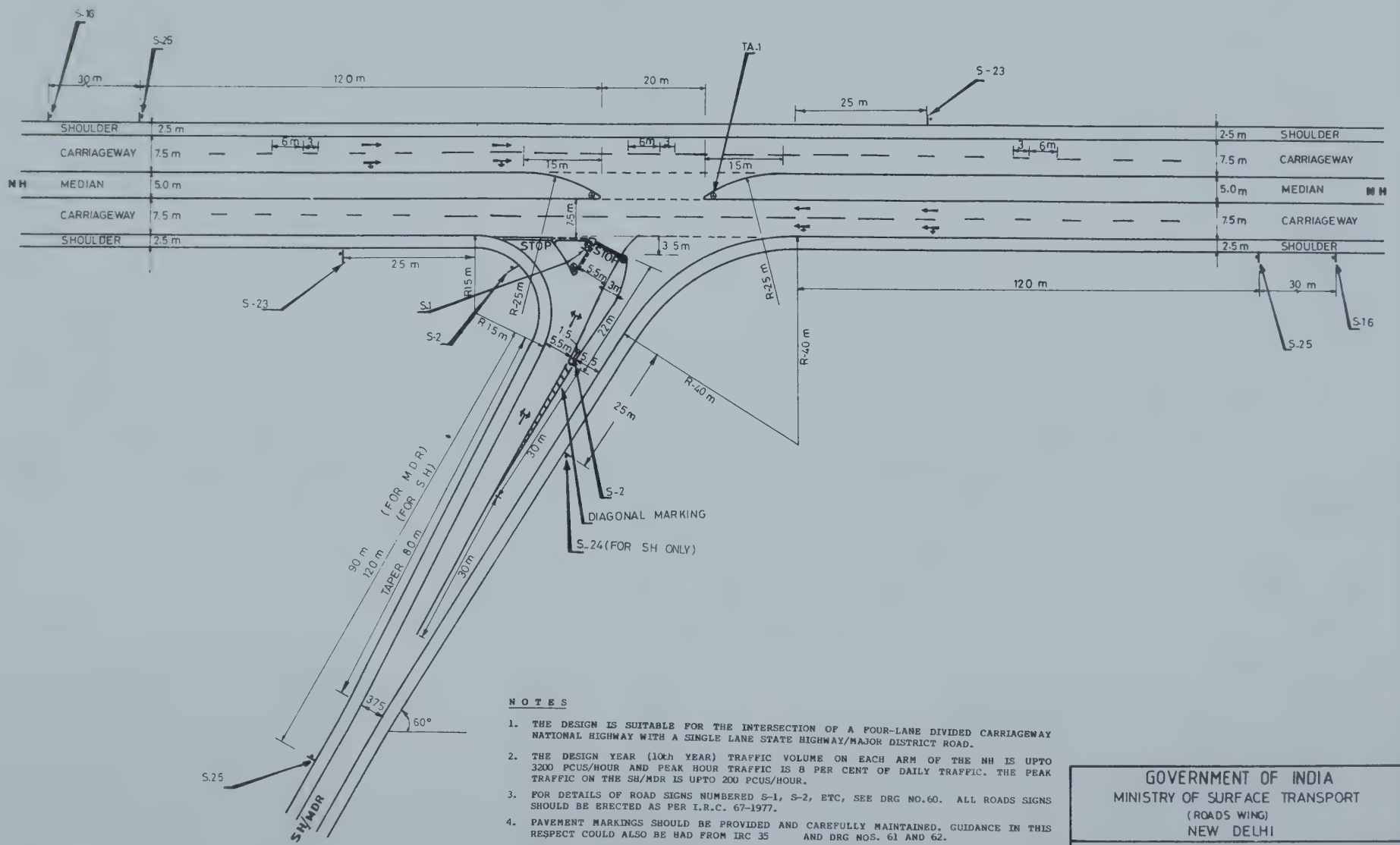
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

T-INTERSECTION INVOLVING A FOUR-LANE NATIONAL HIGHWAY AND A LIGHTLY TRAFFICKED SH/MDR

SCALE: 0 5 10 15 20 m
1 500

DRG NO. 17
NH 4-SHMDR1/17/T-4



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY WITH A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM OF THE NH IS UPTO 3200 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC. THE PEAK TRAFFIC ON THE SH/MDR IS UPTO 200 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

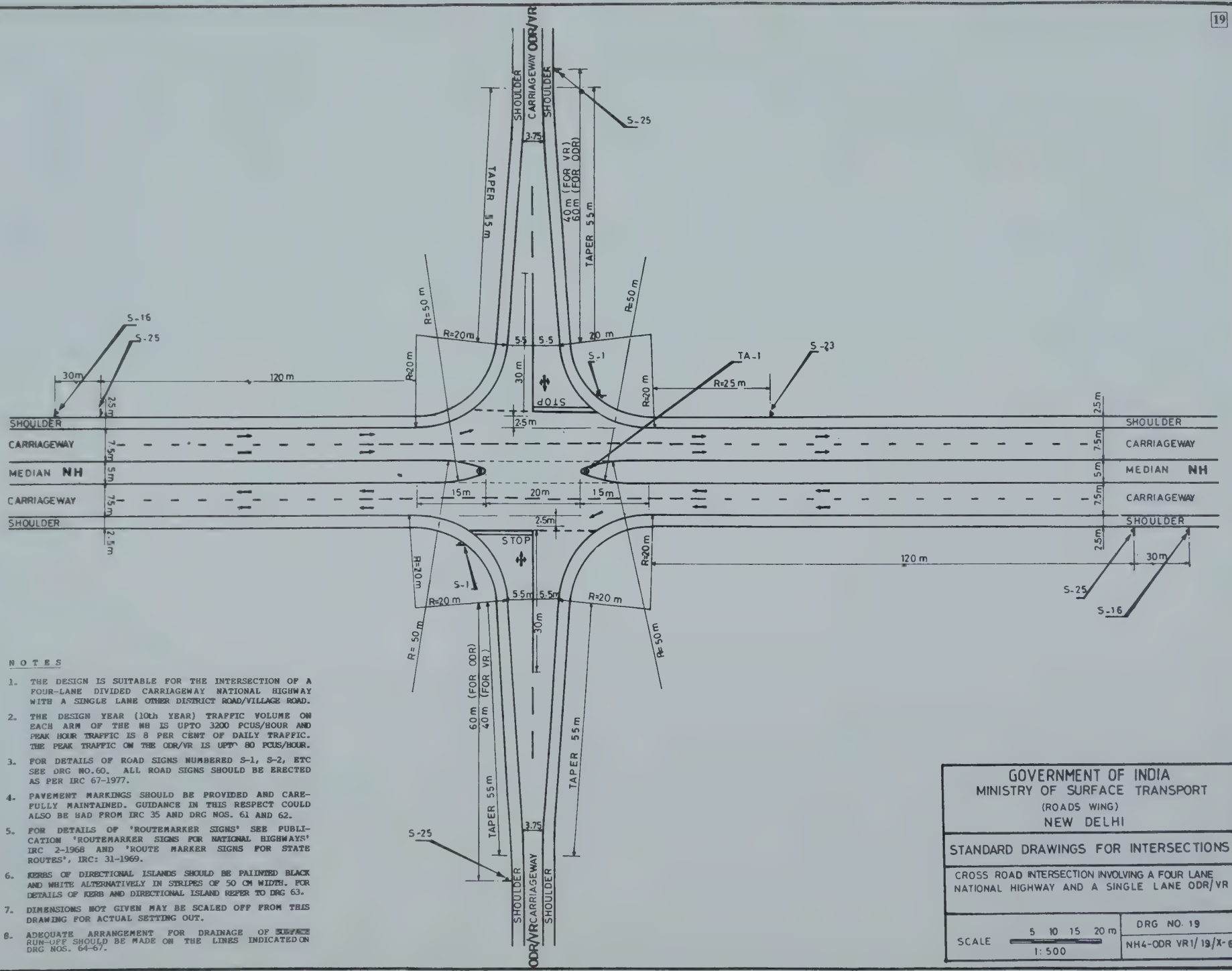
STANDARD DRAWINGS FOR INTERSECTIONS

Y INTERSECTION INVOLVING A FOUR-LANE NATIONAL HIGHWAY AND A LIGHTLY TRAFFICKED SH/MDR

SCALE 0 5 10 15 20 m
1.500

DRG NO.18

NH4-SH MDR1/ 18 / Y-3



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY WITH A SINGLE LANE OTHER DISTRICT ROAD/VILLAGE ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM OF THE NH IS UPTO 3200 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC. THE PEAK TRAFFIC ON THE ODR/VR IS UPTO 80 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

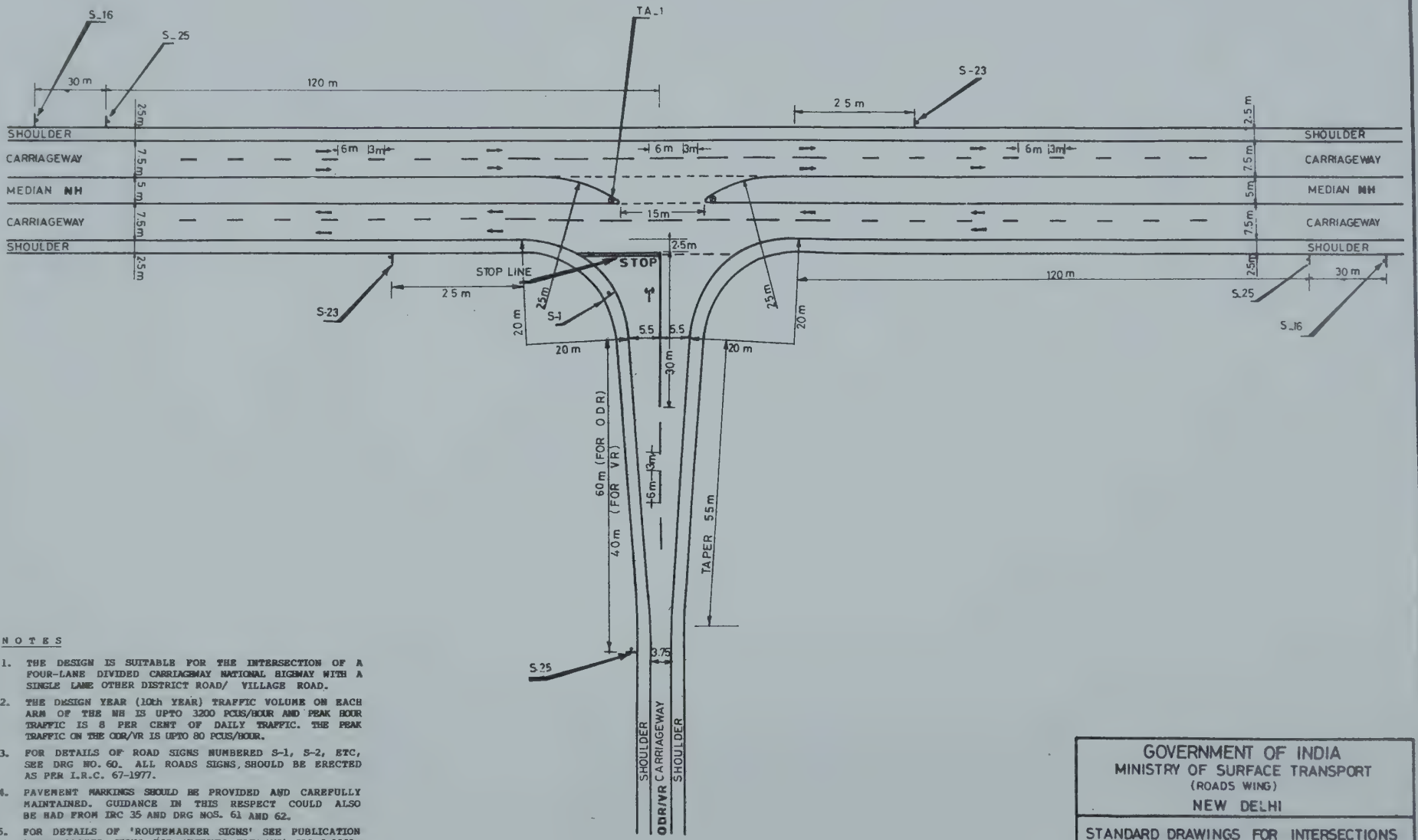
STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION INVOLVING A FOUR LANE NATIONAL HIGHWAY AND A SINGLE LANE ODR/VR

SCALE 5 10 15 20 m
1:500

DRG NO. 19

NH4-ODR VR1/19/X-6



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY WITH A SINGLE LANE OTHER DISTRICT ROAD/ VILLAGE ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC VOLUME ON EACH ARM OF THE NH IS UPTO 3200 PCUS/HOUR AND PEAK HOUR TRAFFIC IS 8 PER CENT OF DAILY TRAFFIC. THE PEAK TRAFFIC ON THE ODR/VR IS UPTO 80 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROADS SIGNS, SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

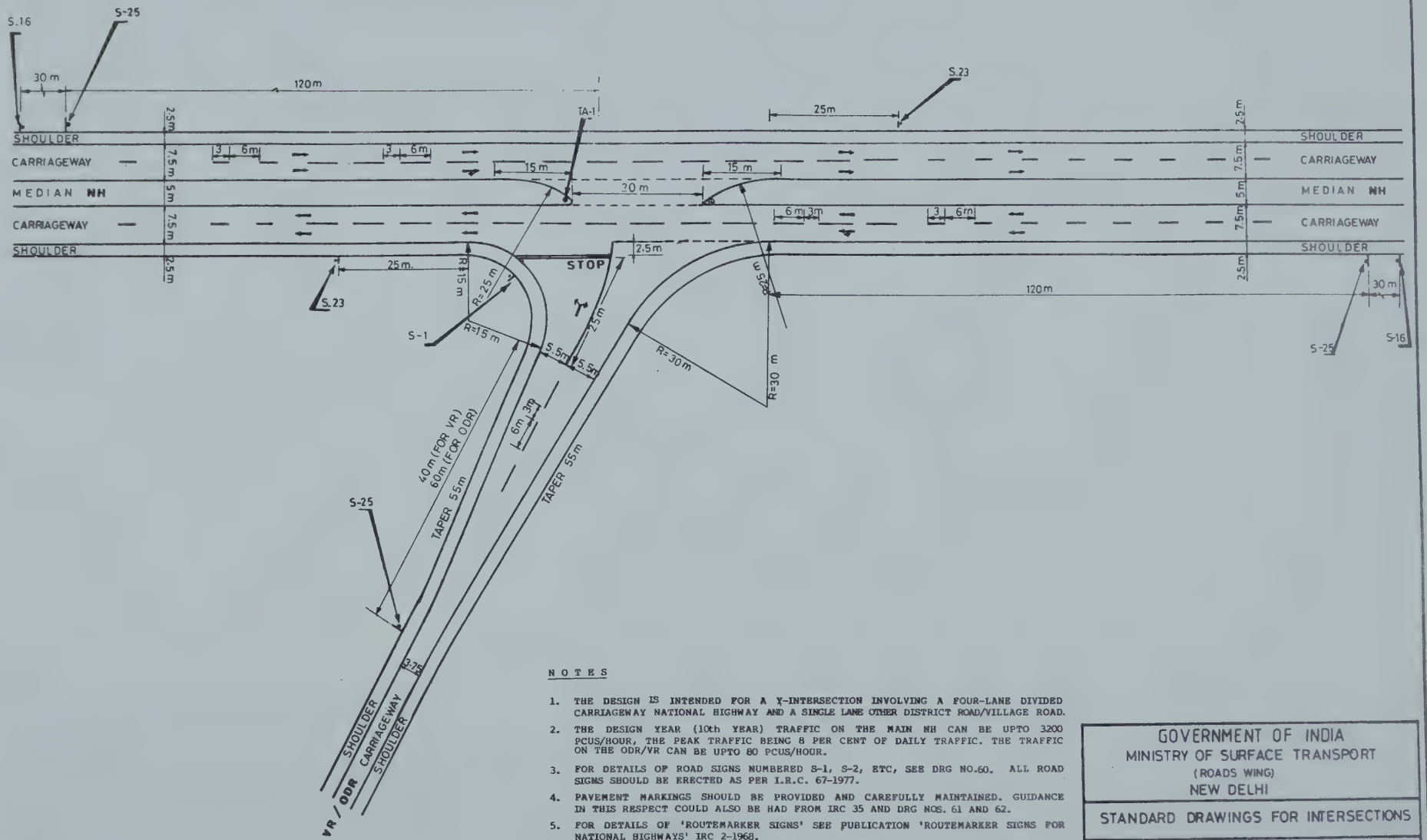
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

T-INTERSECTION INVOLVING A FOUR-LANE NATIONAL HIGHWAY AND A SINGLE LANE ODR/VR

SCALE 0 5 10 15 20 m
1:500

DRG NO. 20
NH4-ODRVRI/20/T-5



NOTES

1. THE DESIGN IS INTENDED FOR A Y-INTERSECTION INVOLVING A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY AND A SINGLE LANE OTHER DISTRICT ROAD/VILLAGE ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE MAIN NH CAN BE UPTO 3200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE ODR/VR CAN BE UPTO 80 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTTING OUT.
8. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

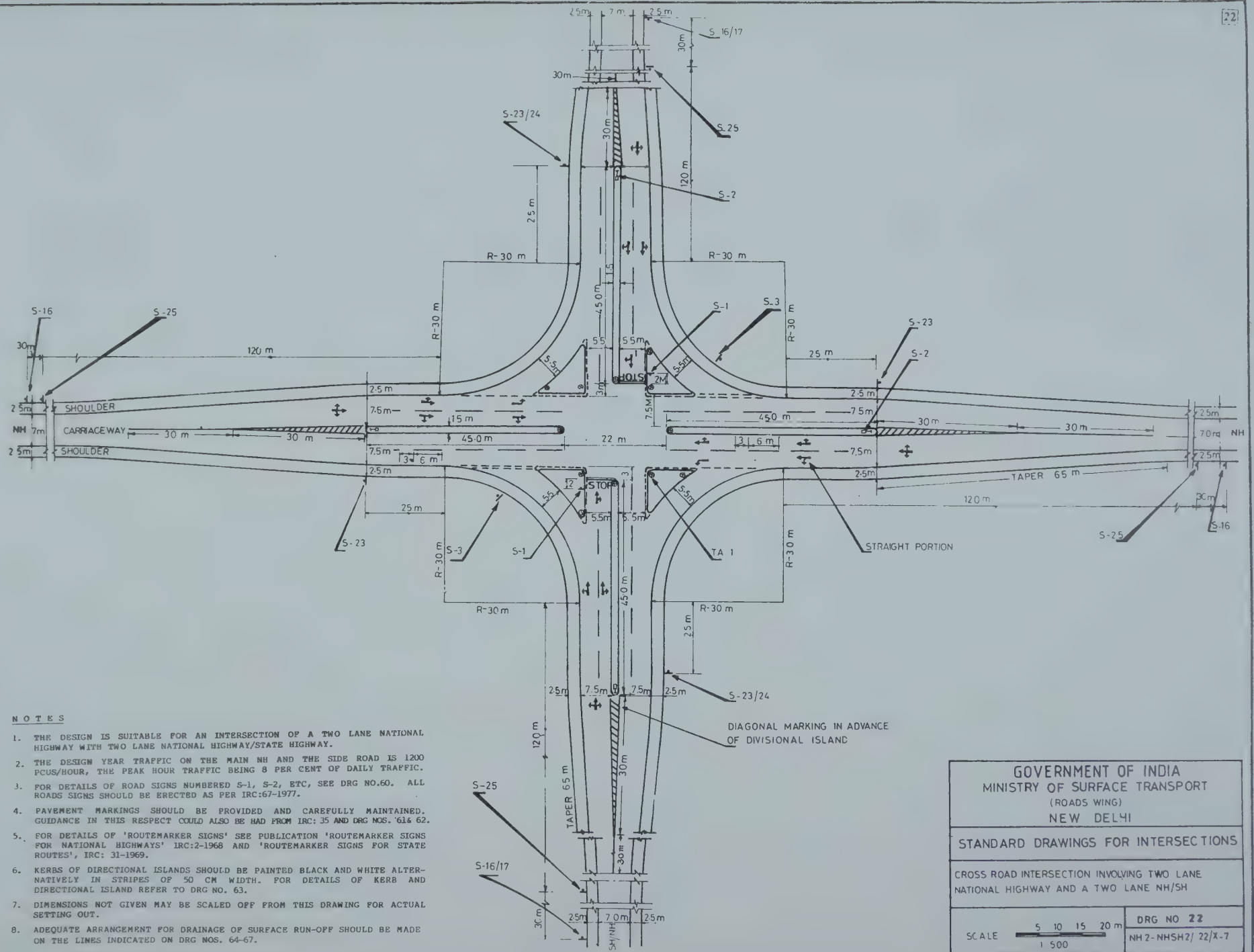
STANDARD DRAWINGS FOR INTERSECTIONS

Y-INTERSECTION INVOLVING FOUR-LANE NATIONAL HIGHWAY AND A SINGLE-LANE ODR/VR

SCALE: 0 5 10 15 20m
1:500

DRG NO. 21

NH 4-ODR VR1/21/Y-S



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A TWO LANE NATIONAL HIGHWAY WITH TWO LANE NATIONAL HIGHWAY/STATE HIGHWAY.
2. THE DESIGN YEAR TRAFFIC ON THE MAIN NH AND THE SIDE ROAD IS 1200 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER IRC:67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61& 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC:2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

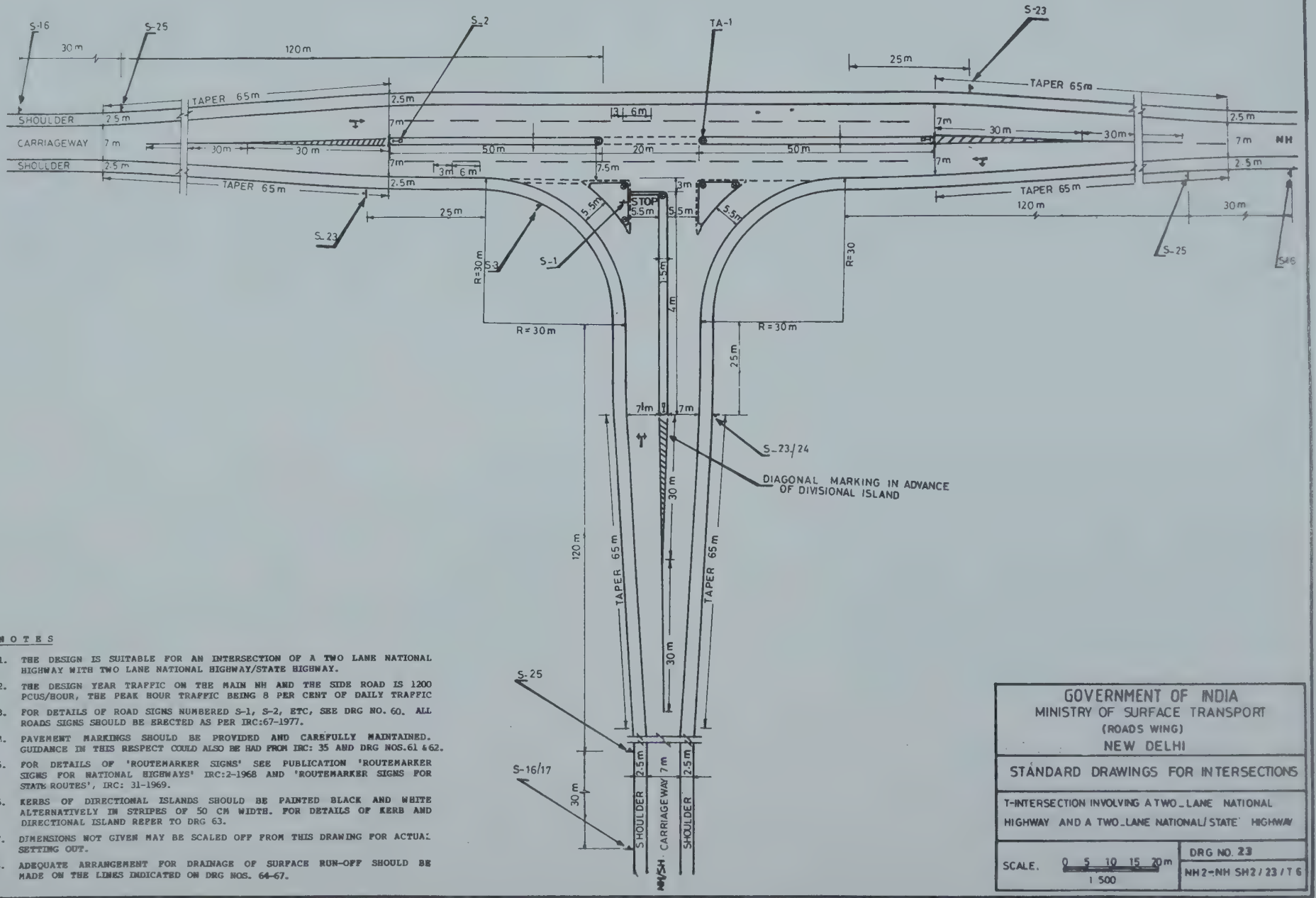
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION INVOLVING TWO LANE NATIONAL HIGHWAY AND A TWO LANE NH/SH

SCALE 5 10 15 20 m
1 500

DRG NO 22
NH 2-NHSH 2/ 22/X-7



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A TWO LANE NATIONAL HIGHWAY WITH TWO LANE NATIONAL HIGHWAY/STATE HIGHWAY.
2. THE DESIGN YEAR TRAFFIC ON THE MAIN NH AND THE SIDE ROAD IS 1200 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER IRC:67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS.61 & 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC:2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

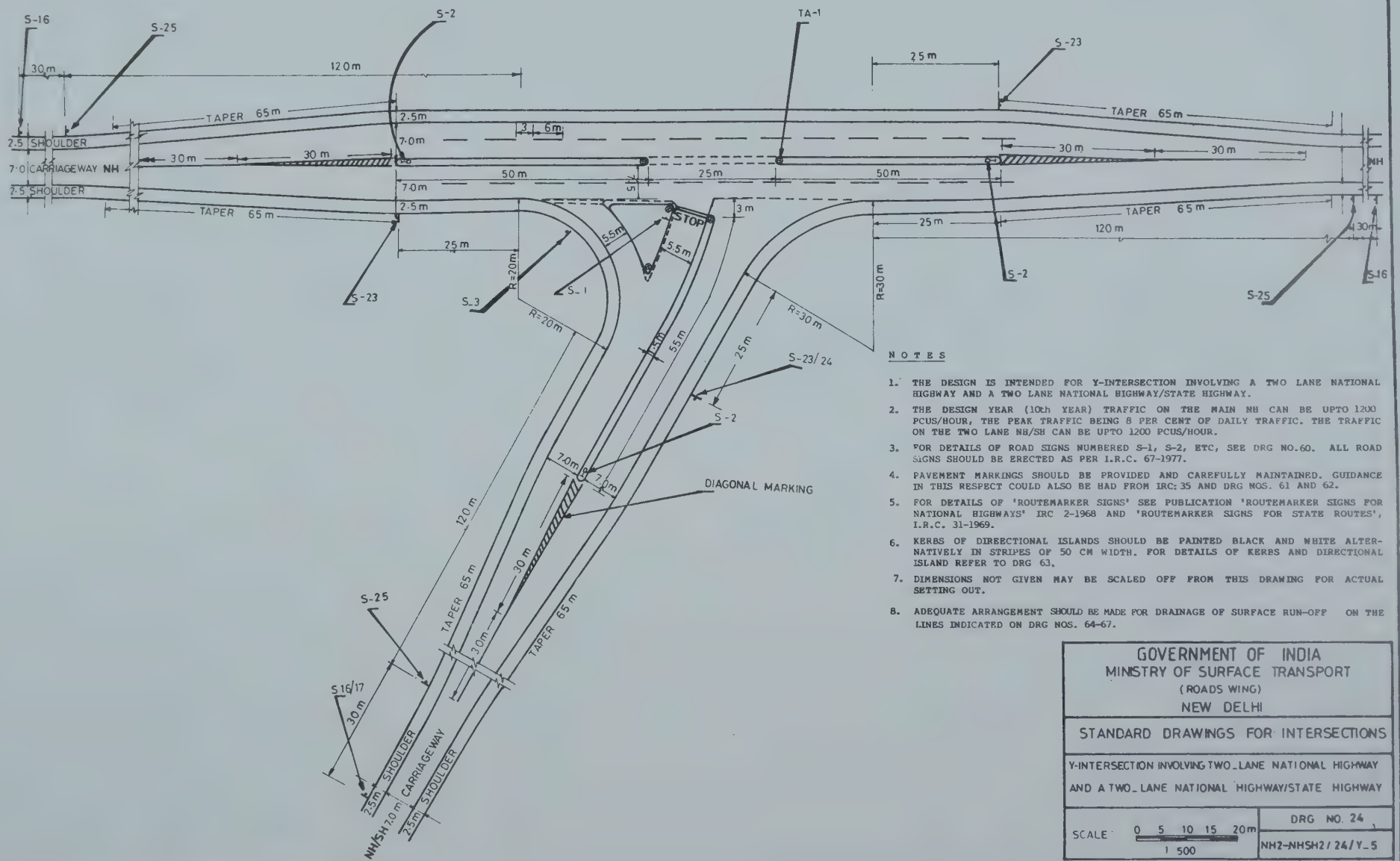
STANDARD DRAWINGS FOR INTERSECTIONS

T-INTERSECTION INVOLVING A TWO-LANE NATIONAL HIGHWAY AND A TWO-LANE NATIONAL/STATE HIGHWAY

SCALE. 0 5 10 15 20m
1 500

DRG NO. 23

NH2-NH SH2/23/T6



NOTES

1. THE DESIGN IS INTENDED FOR Y-INTERSECTION INVOLVING A TWO LANE NATIONAL HIGHWAY AND A TWO LANE NATIONAL HIGHWAY/STATE HIGHWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE MAIN NH CAN BE UPTO 1200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE TWO LANE NH/SH CAN BE UPTO 1200 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', I.R.C. 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

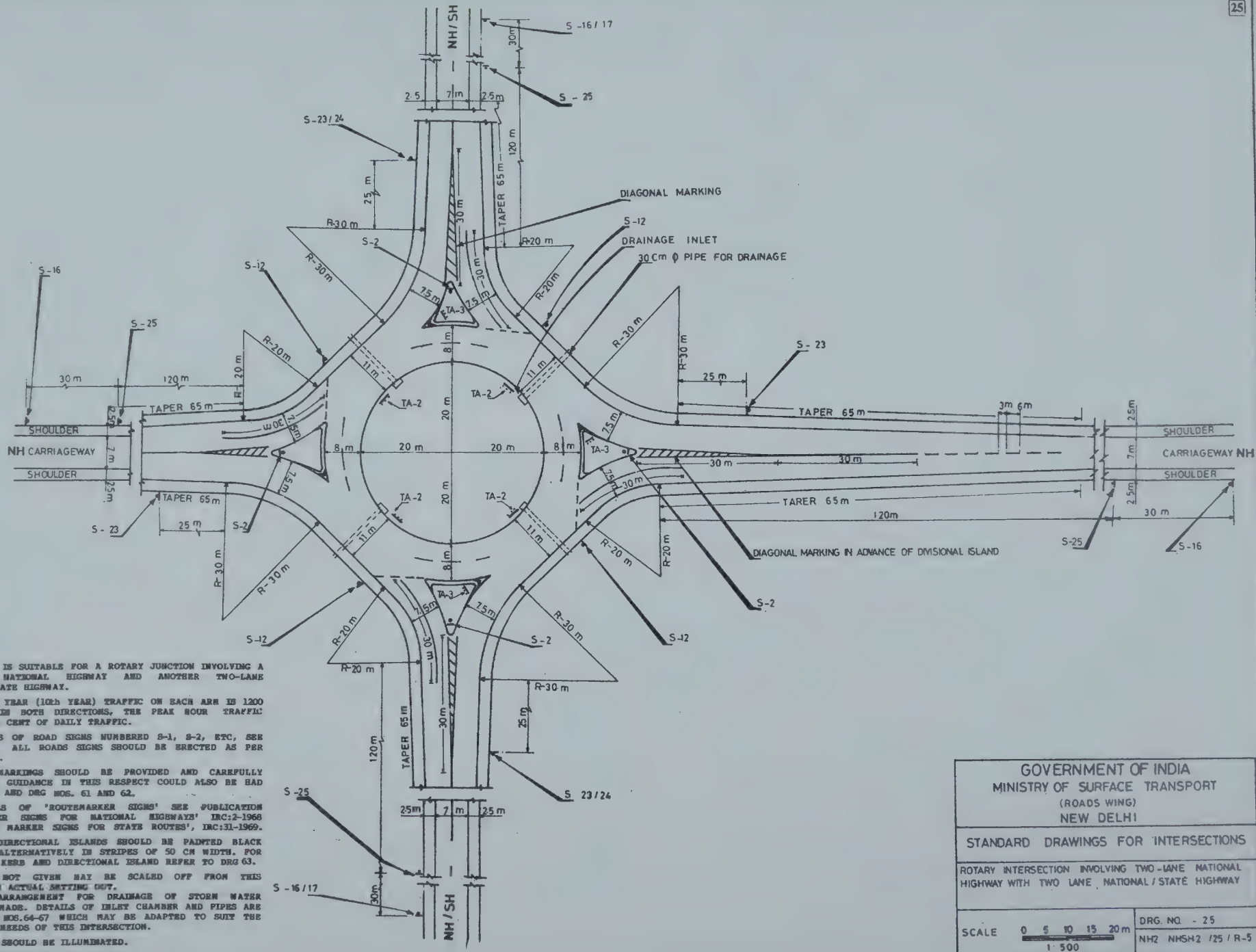
STANDARD DRAWINGS FOR INTERSECTIONS

Y-INTERSECTION INVOLVING TWO-LANE NATIONAL HIGHWAY AND A TWO-LANE NATIONAL HIGHWAY/STATE HIGHWAY

SCALE 0 5 10 15 20m
1 500

DRG NO. 24

NH2-NHSH2/24/Y-5



NOTES

1. THE DESIGN IS SUITABLE FOR A ROTARY JUNCTION INVOLVING A TWO-LANE NATIONAL HIGHWAY AND ANOTHER TWO-LANE NATIONAL/STATE HIGHWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON EACH ARM IS 1200 PCUS/HOUR IN BOTH DIRECTIONS, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO. 60. ALL ROADS SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC:35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC:2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC:31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF STORM WATER SHOULD BE MADE. DETAILS OF INLET CHAMBER AND PIPES ARE GIVEN IN DRG NOS.64-67 WHICH MAY BE ADAPTED TO SUIT THE PARTICULAR NEEDS OF THIS INTERSECTION.
9. THE ROTARY SHOULD BE ILLUMINATED.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

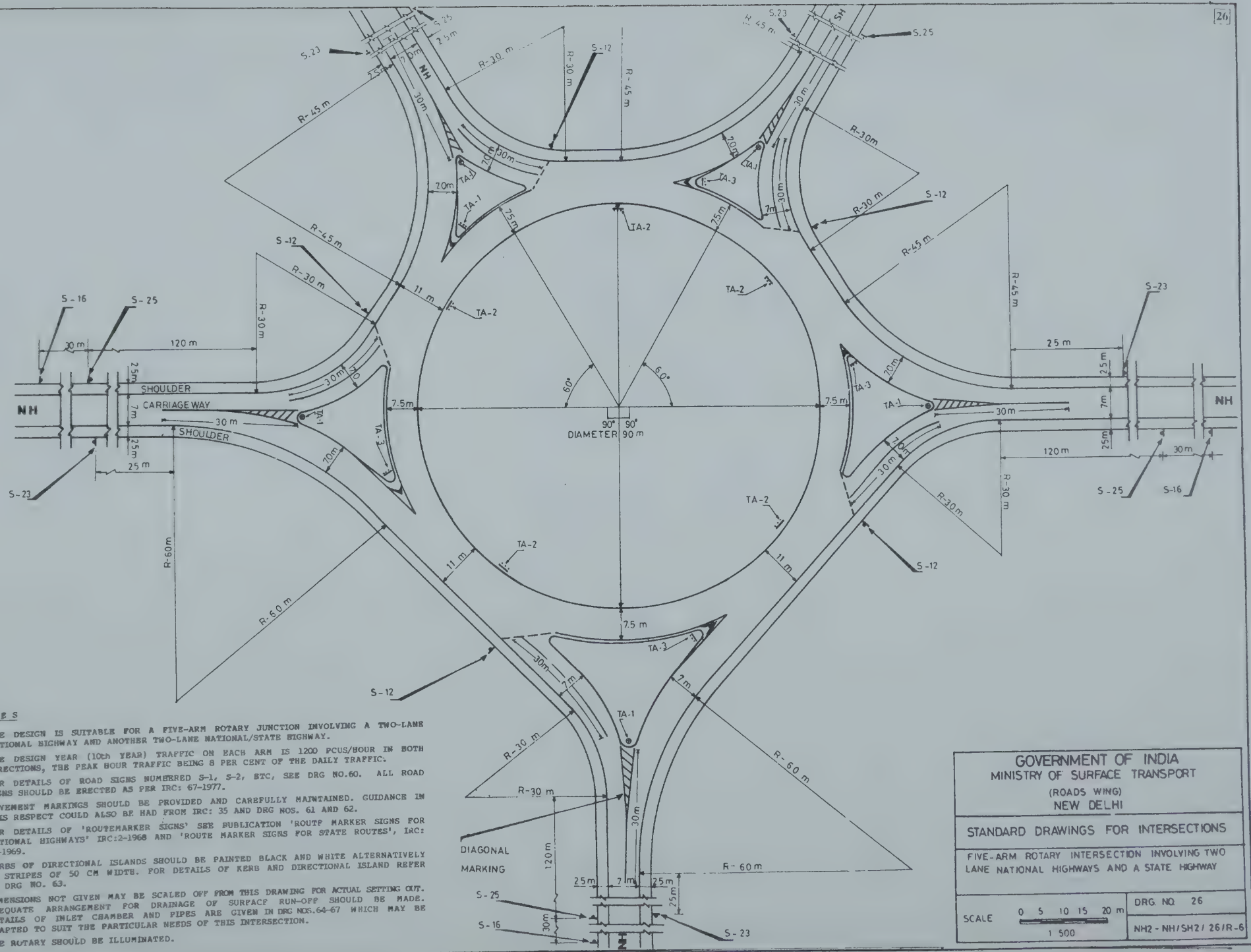
STANDARD DRAWINGS FOR INTERSECTIONS

ROTARY INTERSECTION INVOLVING TWO-LANE NATIONAL HIGHWAY WITH TWO LANE NATIONAL / STATE HIGHWAY

SCALE 0 5 10 15 20 m
1 : 500

DRG. NO. - 25

NH2 NHSH2 /25 / R-5



NOTES

1. THE DESIGN IS SUITABLE FOR A FIVE-ARM ROTARY JUNCTION INVOLVING A TWO-LANE NATIONAL HIGHWAY AND ANOTHER TWO-LANE NATIONAL/STATE HIGHWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON EACH ARM IS 1200 PCUS/HOUR IN BOTH DIRECTIONS, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF THE DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC:2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE. DETAILS OF INLET CHAMBER AND PIPES ARE GIVEN IN DRG NOS.64-67 WHICH MAY BE ADAPTED TO SUIT THE PARTICULAR NEEDS OF THIS INTERSECTION.
9. THE ROTARY SHOULD BE ILLUMINATED.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

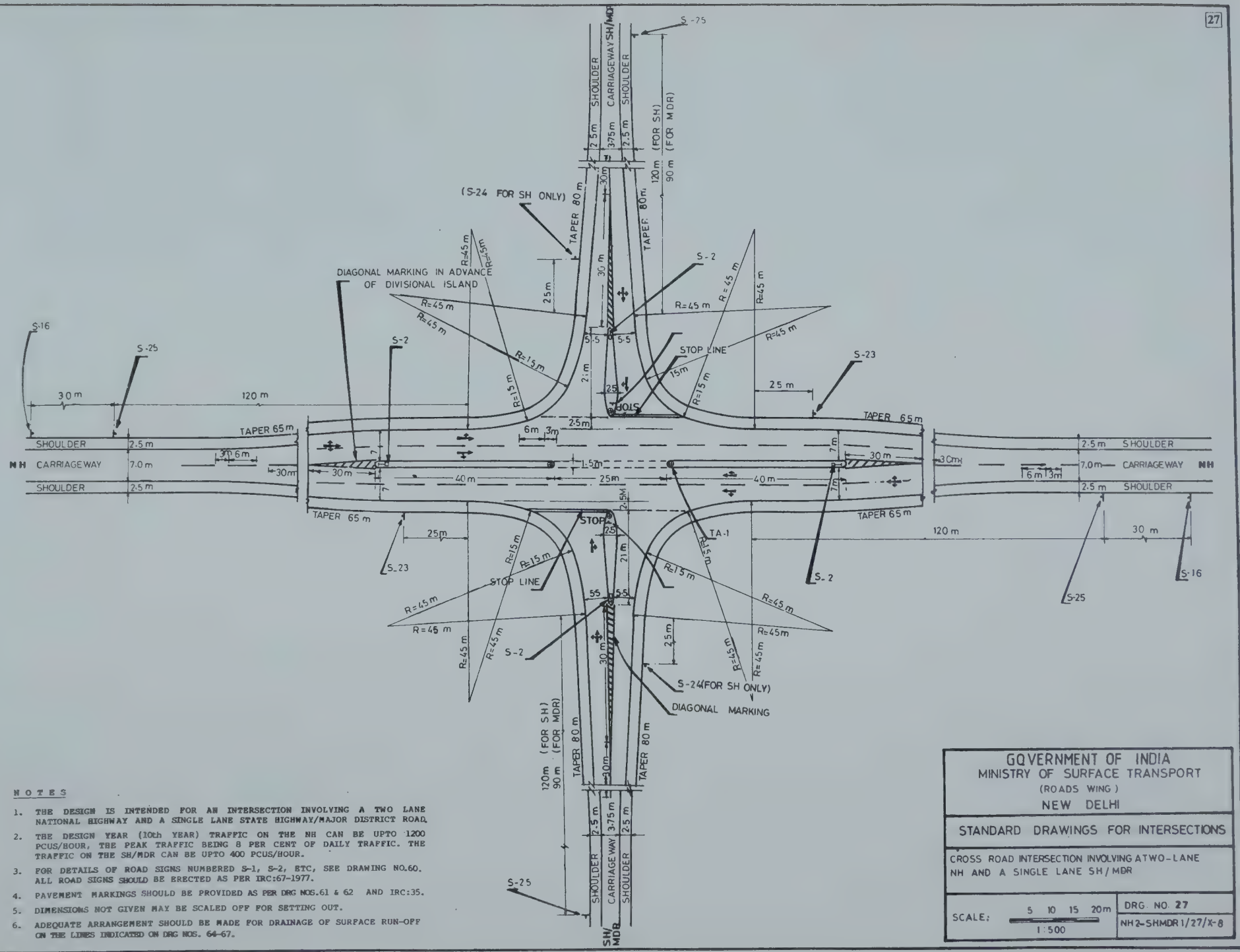
STANDARD DRAWINGS FOR INTERSECTIONS

FIVE-ARM ROTARY INTERSECTION INVOLVING TWO LANE NATIONAL HIGHWAYS AND A STATE HIGHWAY

SCALE 0 5 10 15 20 m
1 500

DRG. NO. 26

NH2 - NH/SH2/ 26/R-6



NOTES

1. THE DESIGN IS INTENDED FOR AN INTERSECTION INVOLVING A TWO LANE NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH CAN BE UPTO 1200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE SH/MDR CAN BE UPTO 400 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC:67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRG NOS.61 & 62 AND IRC:35.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
6. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

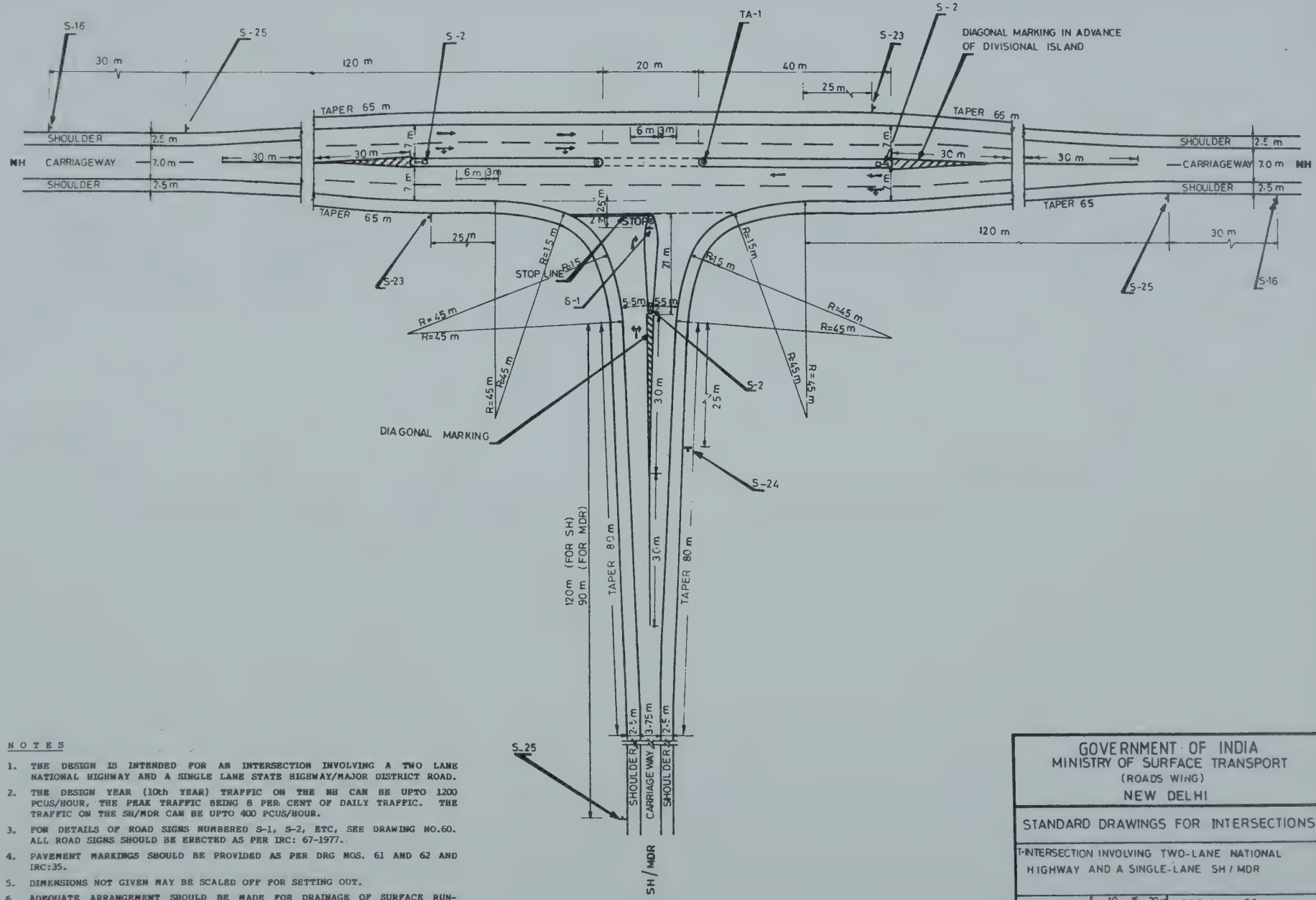
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION INVOLVING A TWO-LANE NH AND A SINGLE LANE SH/MDR

SCALE: 5 10 15 20m
1:500

DRG. NO. 27
NH2-SHMDR1/27/X-8



NOTES

1. THE DESIGN IS INTENDED FOR AN INTERSECTION INVOLVING A TWO LANE NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH CAN BE UPTO 1200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE SH/MDR CAN BE UPTO 400 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRG NOS. 61 AND 62 AND IRC:35.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
6. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

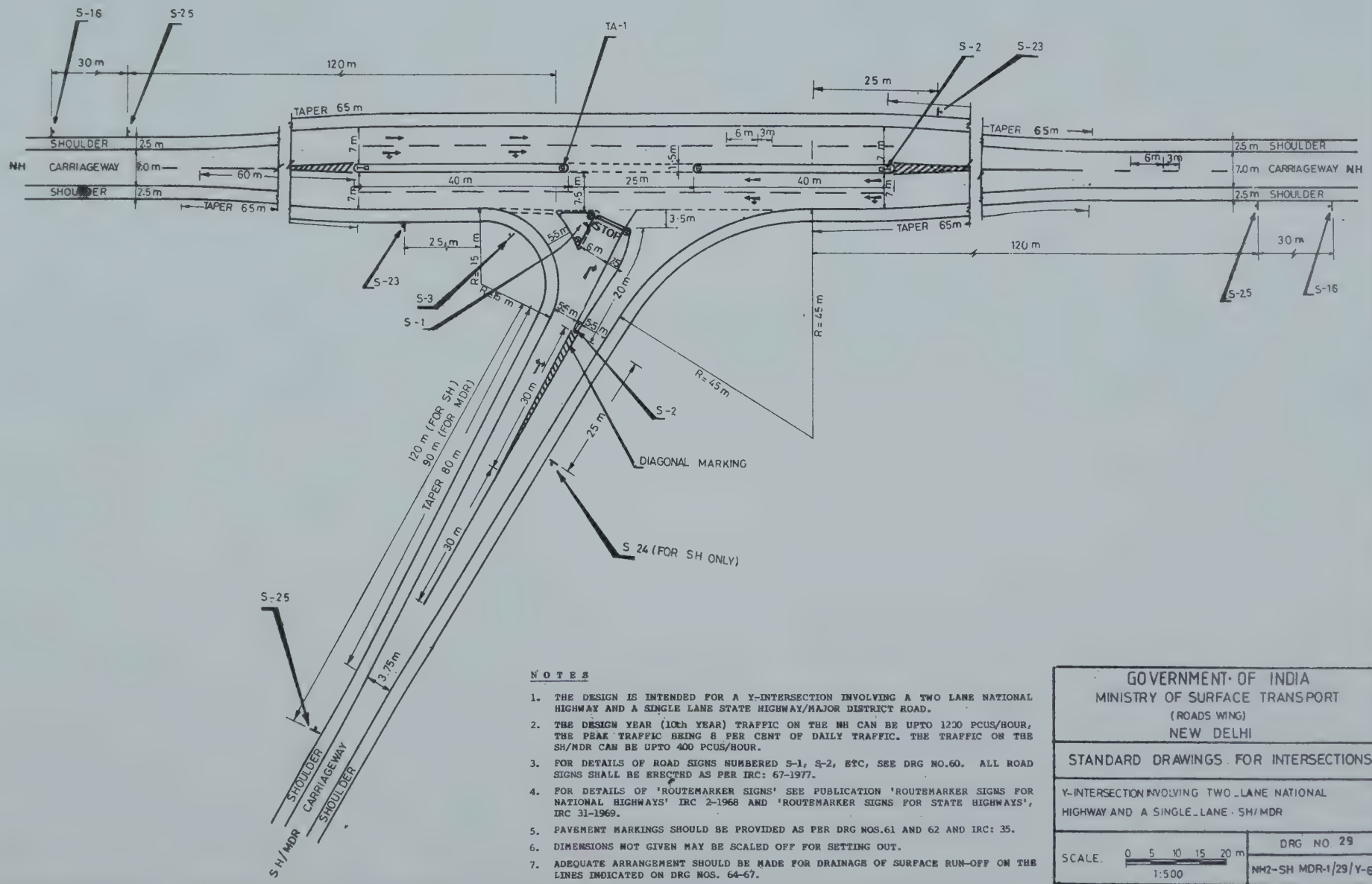
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

T-INTERSECTION INVOLVING TWO-LANE NATIONAL HIGHWAY AND A SINGLE-LANE SH / MDR

SCALE 5 10 15 20m
1-500

DRG NO 28
NH2-SHMDR1/28/T-7



NOTES

1. THE DESIGN IS INTENDED FOR A Y-INTERSECTION INVOLVING A TWO LANE NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH CAN BE UPTO 1200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE SH/MDR CAN BE UPTO 400 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC: 67-1977.
4. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE HIGHWAYS', IRC 31-1969.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRG NOS.61 AND 62 AND IRC: 35.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
7. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

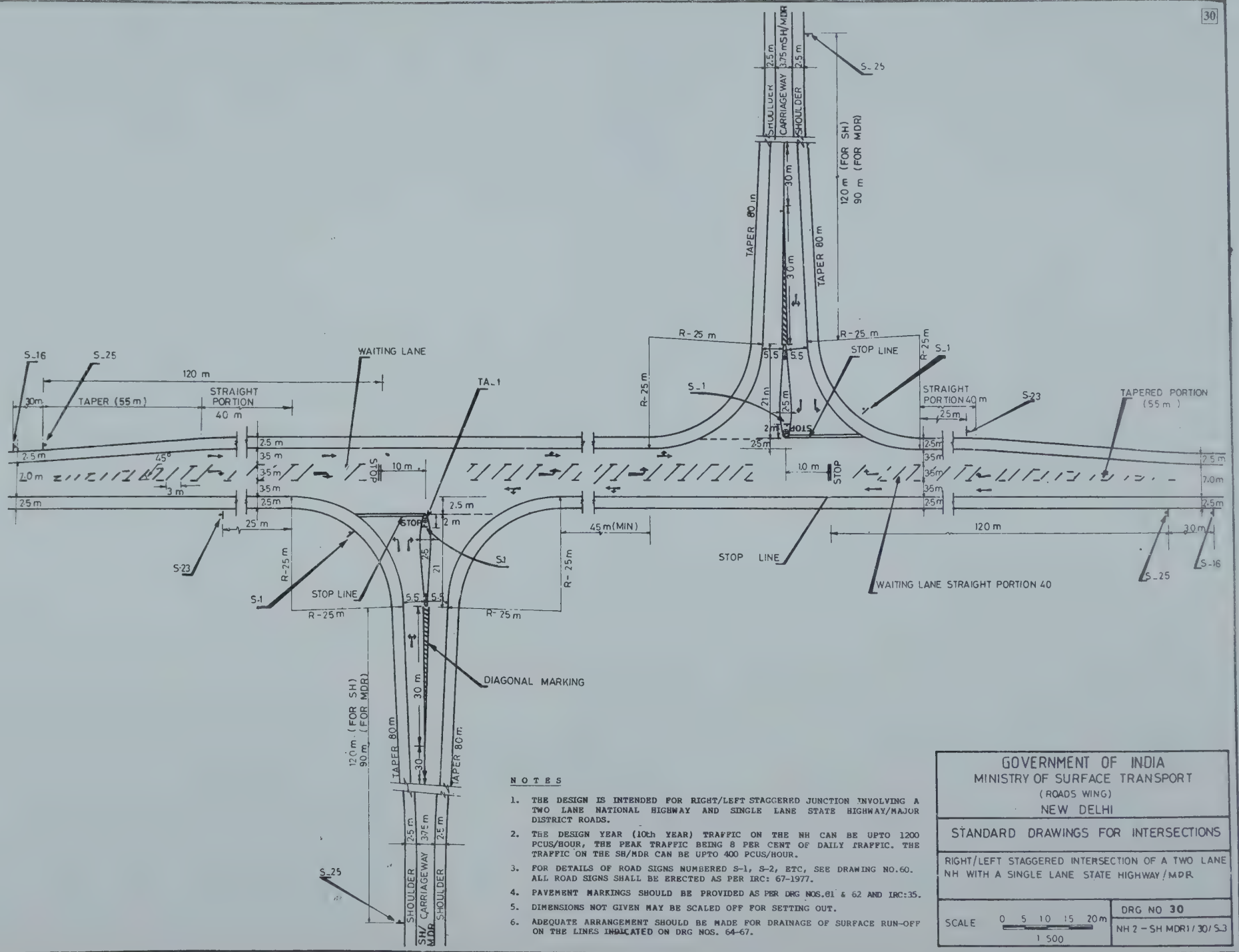
STANDARD DRAWINGS FOR INTERSECTIONS

Y-INTERSECTION INVOLVING TWO-LANE NATIONAL HIGHWAY AND A SINGLE-LANE SH/MDR

SCALE. 0 5 10 15 20 m
1:500

DRG NO. 29

NH2-SH MDR-1/29/Y-6



NOTES

1. THE DESIGN IS INTENDED FOR RIGHT/LEFT STAGGERED JUNCTION INVOLVING A TWO LANE NATIONAL HIGHWAY AND SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROADS.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH CAN BE UPTO 1200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE SH/MDR CAN BE UPTO 400 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRG NOS.61 & 62 AND IRC:35.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
6. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

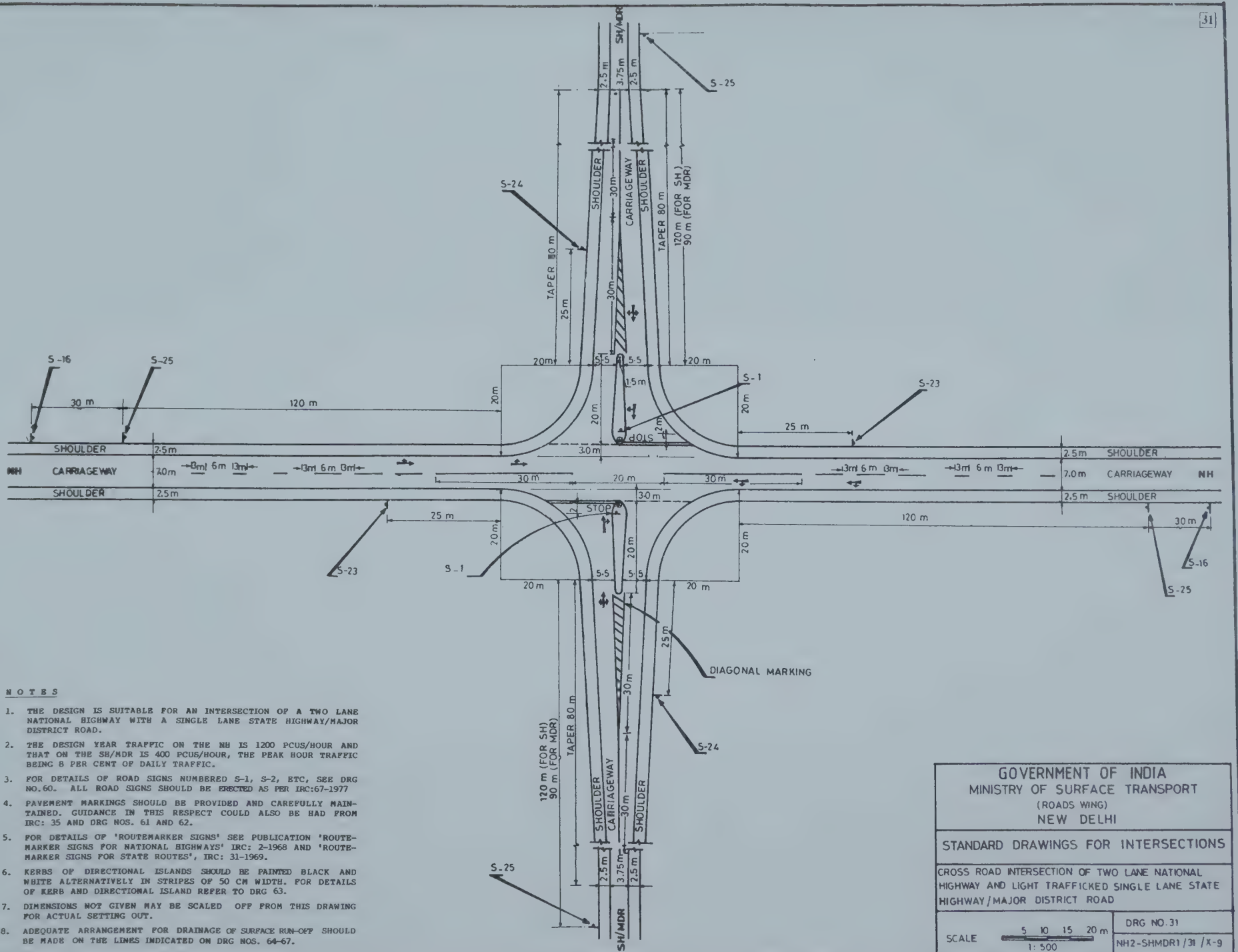
STANDARD DRAWINGS FOR INTERSECTIONS

RIGHT/LEFT STAGGERED INTERSECTION OF A TWO LANE NH WITH A SINGLE LANE STATE HIGHWAY/MDR

SCALE 0 5 10 15 20m
1 500

DRG NO 30

NH 2 - SH MDR1/30/S.3



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A TWO LANE NATIONAL HIGHWAY WITH A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR TRAFFIC ON THE NH IS 1200 PCUS/HOUR AND THAT ON THE SH/MDR IS 400 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC:67-1977
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC: 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

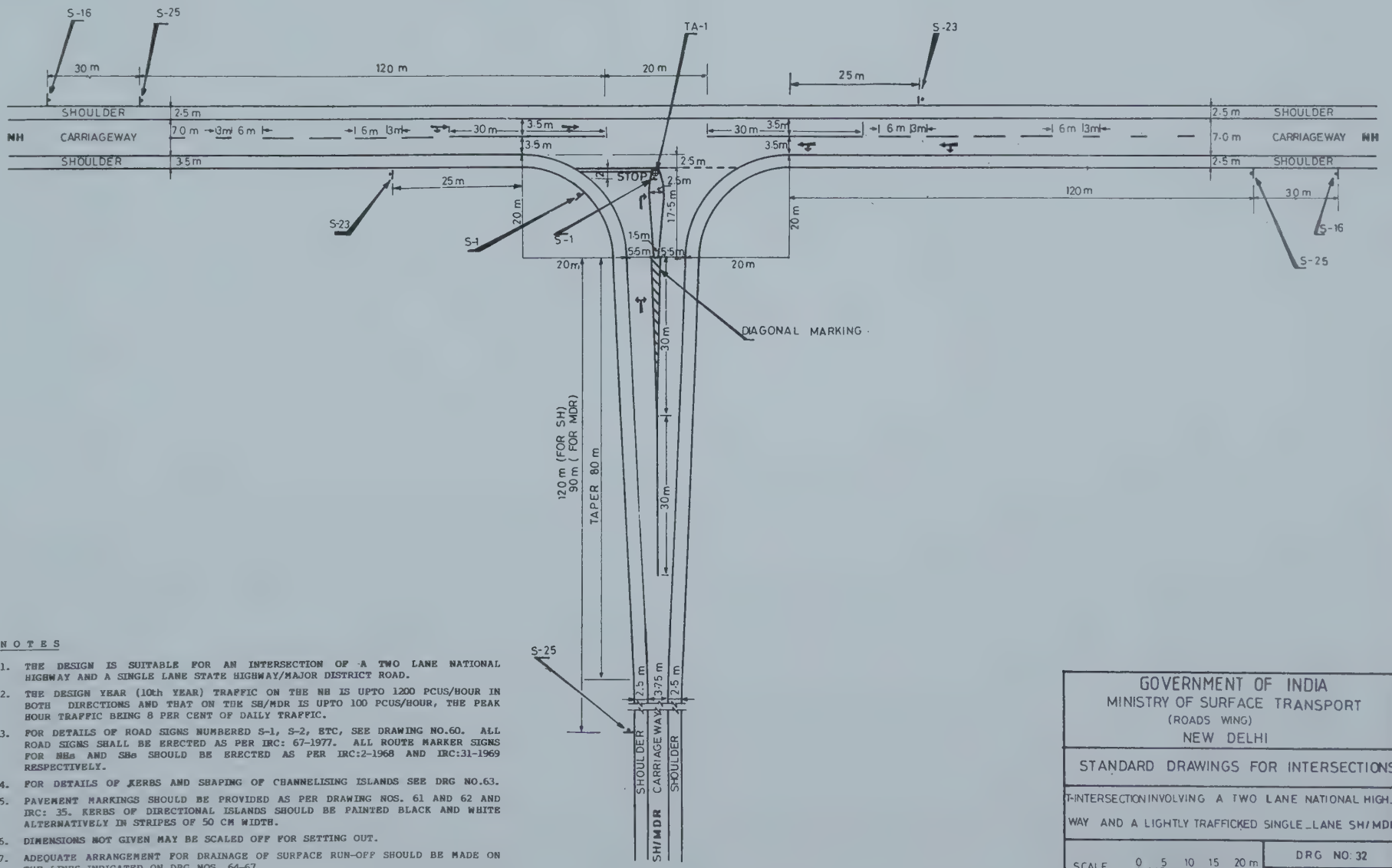
STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION OF TWO LANE NATIONAL HIGHWAY AND LIGHT TRAFFICKED SINGLE LANE STATE HIGHWAY / MAJOR DISTRICT ROAD

SCALE 5 10 15 20 m
1:500

DRG NO.31

NH2-SHMDR1/31/X-9



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A TWO LANE NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 1200 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE SH/MDR IS UPTO 100 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC: 67-1977. ALL ROUTE MARKER SIGNS FOR NHs AND SHs SHOULD BE ERECTED AS PER IRC:2-1968 AND IRC:31-1969 RESPECTIVELY.
4. FOR DETAILS OF KERBS AND SHAPING OF CHANNELISING ISLANDS SEE DRG NO.63.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRAWING NOS. 61 AND 62 AND IRC: 35. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
7. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

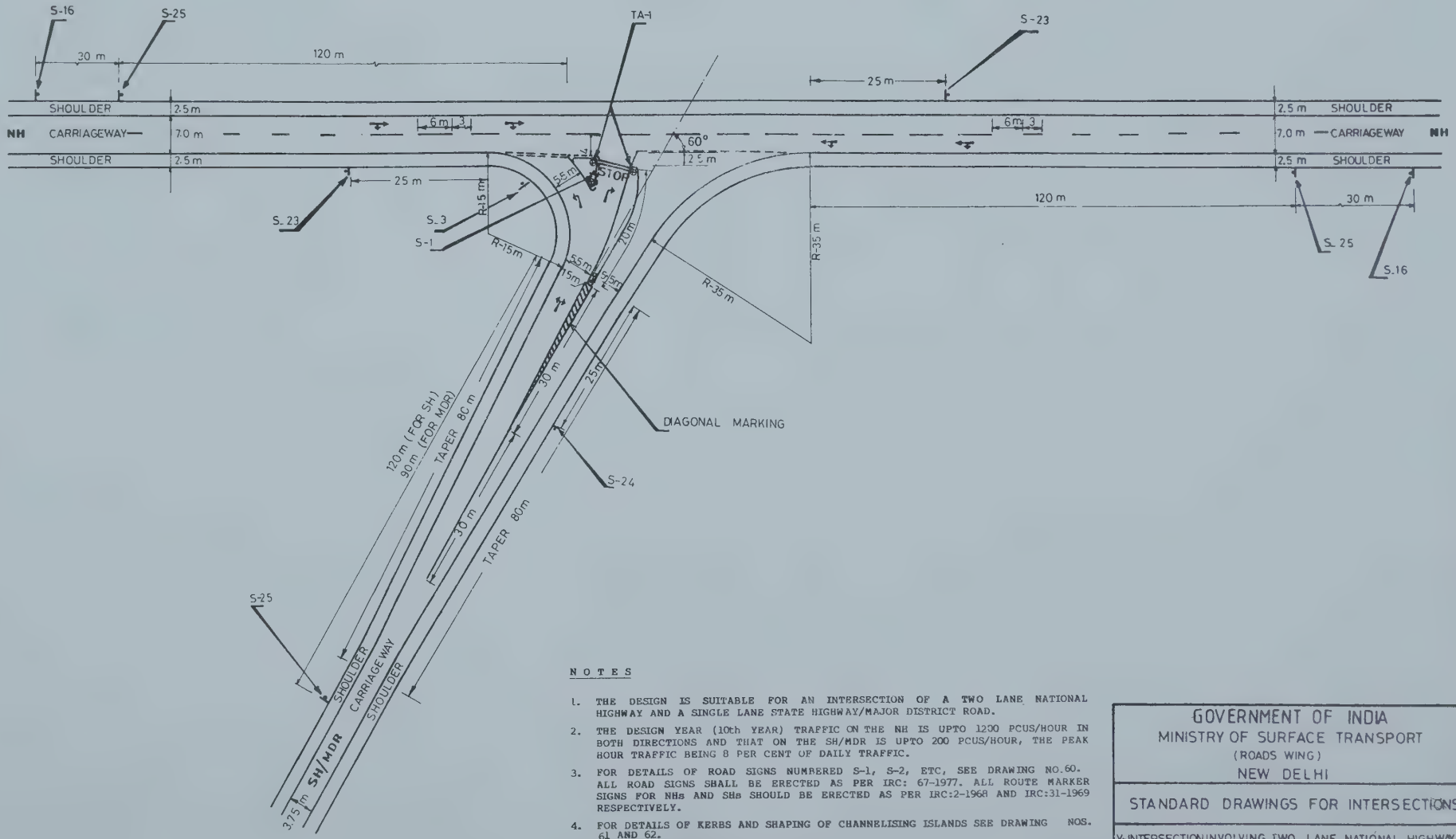
STANDARD DRAWINGS FOR INTERSECTIONS

T-INTERSECTION INVOLVING A TWO LANE NATIONAL HIGHWAY AND A LIGHTLY TRAFFICKED SINGLE LANE SH/MDR

SCALE 0 5 10 15 20 m
1:500

DRG NO: 32

NH 2_SH MDR 1/ 32/ T-8



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A TWO LANE NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 1200 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE SH/MDR IS UPTO 200 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC: 67-1977. ALL ROUTE MARKER SIGNS FOR NHs AND SHs SHOULD BE ERECTED AS PER IRC:2-1968 AND IRC:31-1969 RESPECTIVELY.
4. FOR DETAILS OF KERBS AND SHAPING OF CHANNELISING ISLANDS SEE DRAWING NOS. 61 AND 62.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRAWING NO. 63 AND IRC: 35 KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
7. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

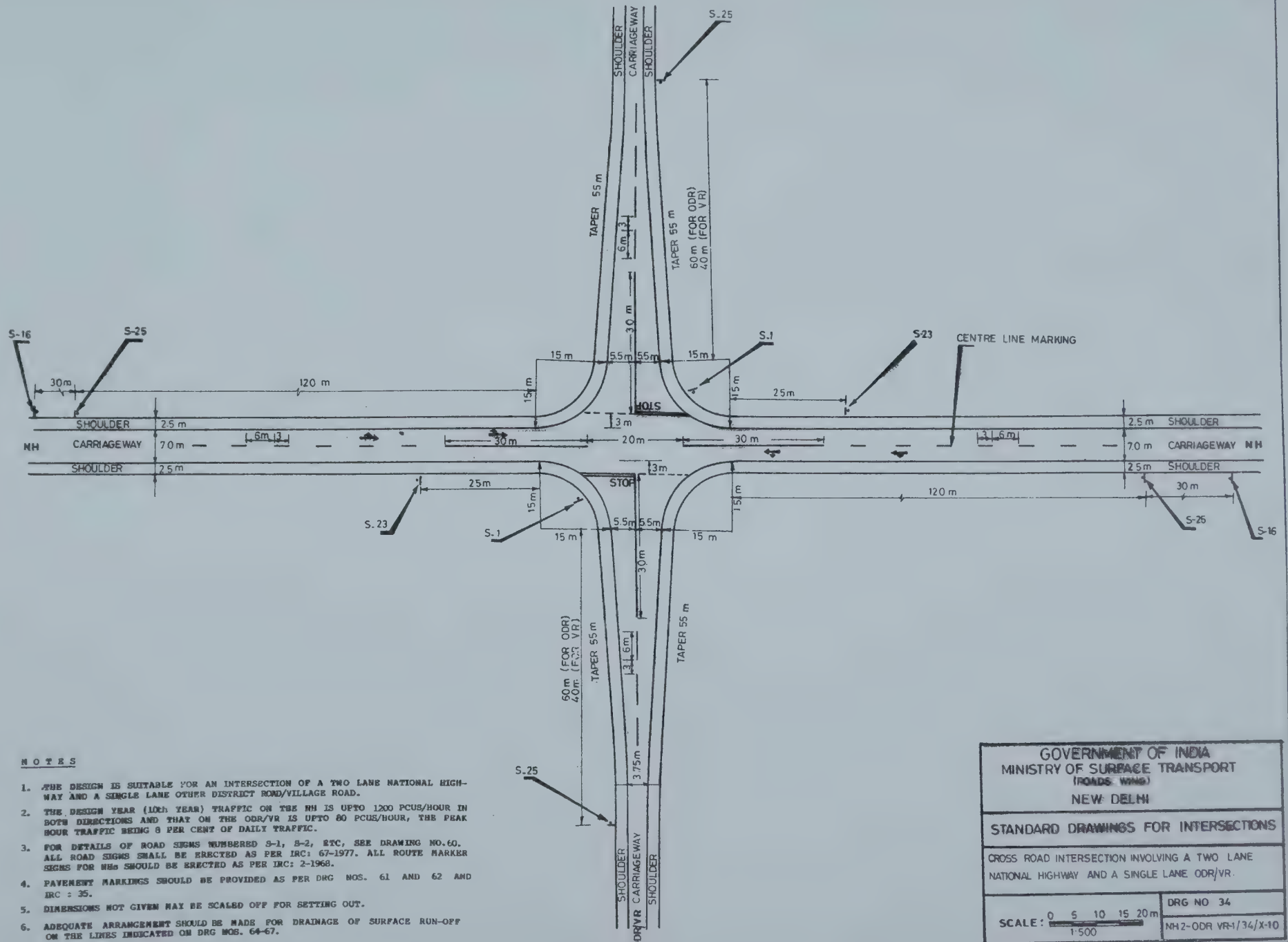
STANDARD DRAWINGS FOR INTERSECTIONS

Y-INTERSECTION INVOLVING TWO LANE NATIONAL HIGHWAY AND LIGHTLY TRAFFICKED SH/MDR

SCALE 0 5 10 15 20 m
1:500

DRG NO 33

NH2-SH MDR1/33/Y_7



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A TWO LANE NATIONAL HIGHWAY AND A SINGLE LANE OTHER DISTRICT ROAD/VILLAGE ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 1200 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE ODR/VR IS UPTO 80 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC: 67-1977. ALL ROUTE MARKER SIGNS FOR NHs SHOULD BE ERECTED AS PER IRC: 2-1968.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRG NOS. 61 AND 62 AND IRC : 35.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
6. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

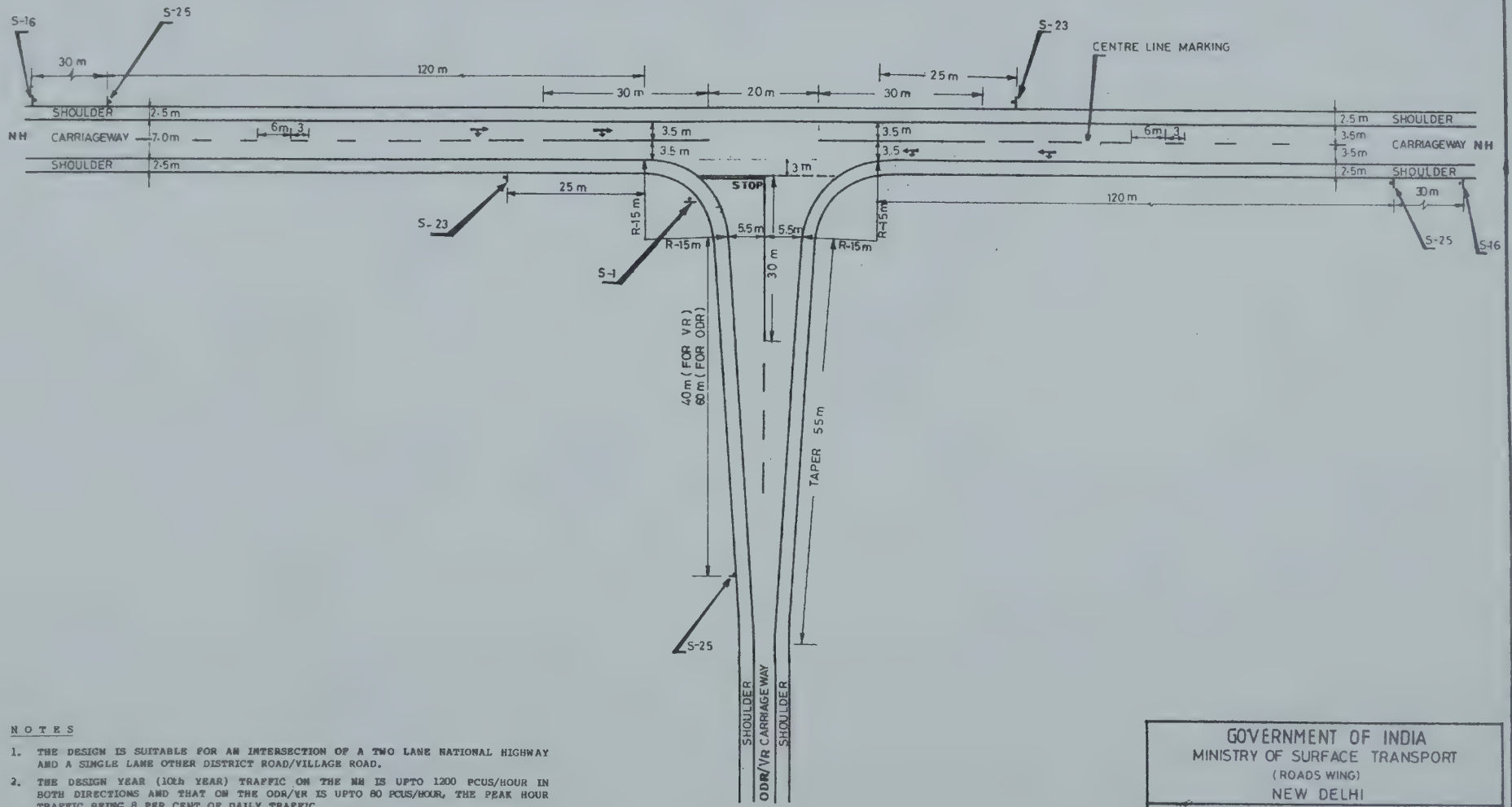
STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION INVOLVING A TWO LANE NATIONAL HIGHWAY AND A SINGLE LANE ODR/VR.

SCALE: 0 5 10 15 20m
1:500

DRG NO 34

NH2-ODR VR-1/34/X-10



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A TWO LANE NATIONAL HIGHWAY AND A SINGLE LANE OTHER DISTRICT ROAD/VILLAGE ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 1200 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE ODR/VR IS UPTO 80 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC: 67-1977. ALL ROUTE MARKER SIGNS FOR NH SHOULD BE ERECTED AS PER IRC: 2-1968.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRG NOS. 61 AND 62 AND IRC: 35. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
6. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

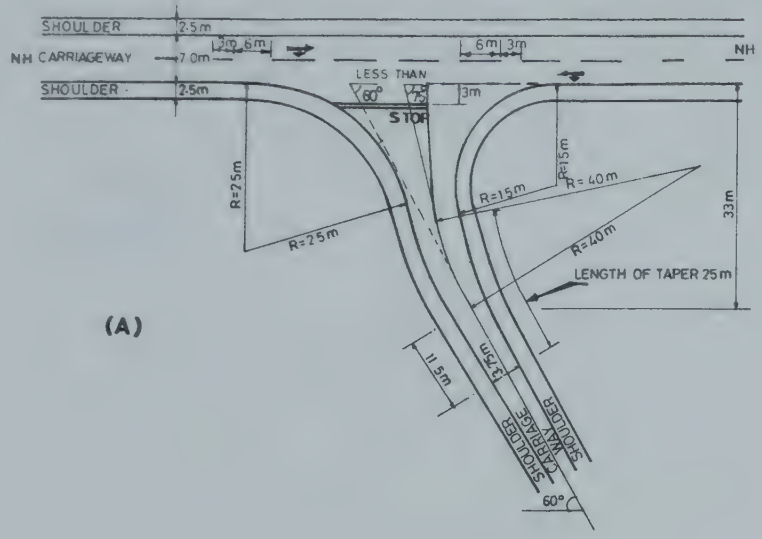
STANDARD DRAWINGS FOR INTERSECTIONS

T-INTERSECTION INVOLVING TWO-LANE NATIONAL HIGHWAY AND A SINGLE-LANE OTHER DISTRICT ROAD/VILLAGE ROAD

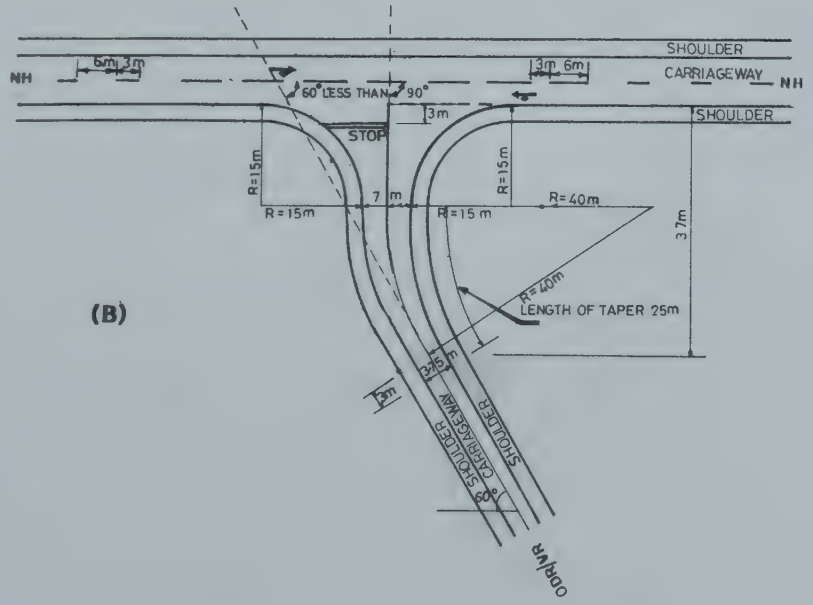
SCALE 0 5 10 15 20 m
1:500

DRG NO. 35

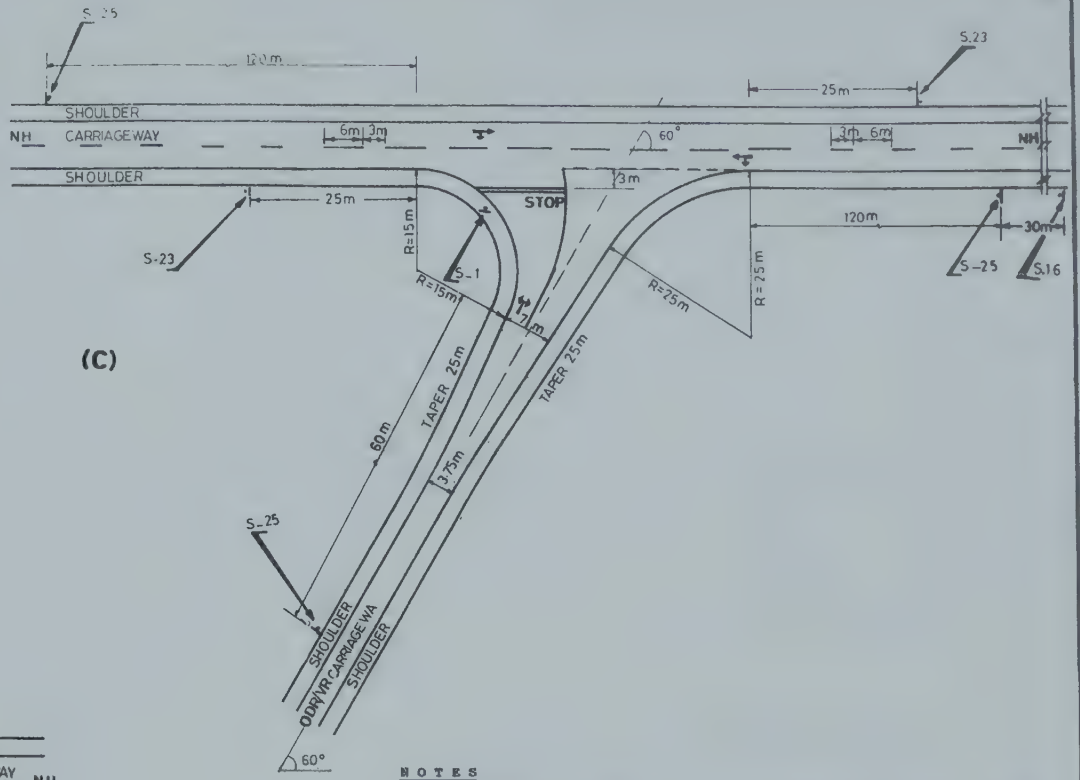
NH2-ODR-VR1/35/T-9



(A)



(B)



NOTES

1. THE DESIGNS ARE INTENDED FOR AN Y-INTERSECTION INVOLVING A TWO-LANE NATIONAL HIGHWAY AND A SINGLE LANE OTHER DISTRICT ROAD/VILLAGE ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH CAN BE UPTO 1200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE ODR/VR CAN BE UPTO 80 PCUS/HOUR.
3. WHERE THE SIDE ROAD INTERSECTS THE MAIN ROAD AT ANGLES GREATER THAN 60°, THE DESIGN SHOWN AS 'C' CAN BE ADOPTED. WHERE THE ANGLE IS LESS THAN 60°, DESIGN 'A' OR 'B' CAN BE ADOPTED.
4. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC: 67-1977.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRAWING NOS. 61 AND 62 AND IRC: 35.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
7. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

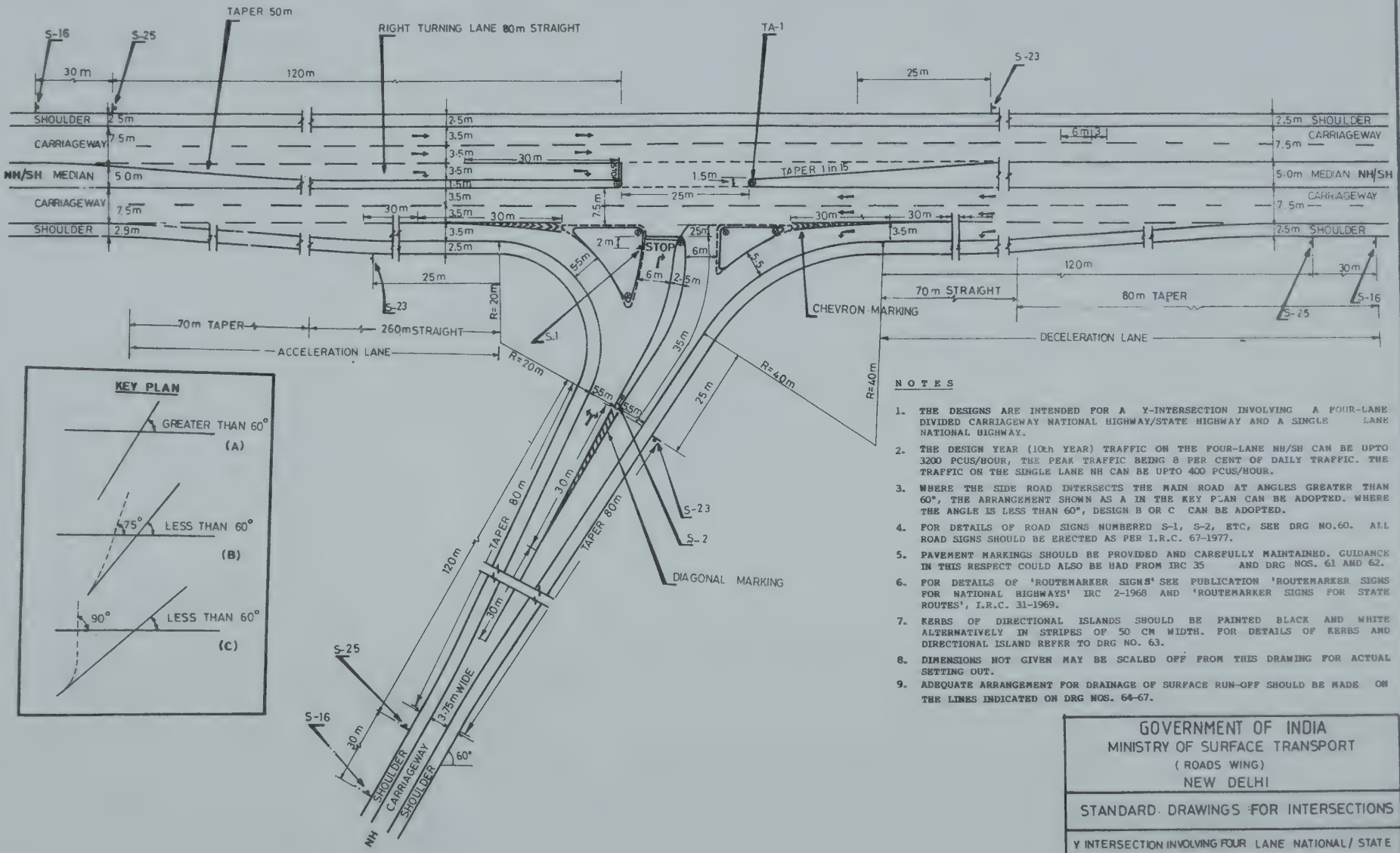
STANDARD DRAWINGS FOR INTERSECTIONS

Y-INTERSECTION INVOLVING TWO LANE NATIONAL HIGHWAY AND A SINGLE LANE ODR/VR

SCALE: 0 5 10 15 20m
1 500

DRG NO 36

NH2-ODR VR1/36/Y-8



NOTES

1. THE DESIGNS ARE INTENDED FOR A Y-INTERSECTION INVOLVING A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY/STATE HIGHWAY AND A SINGLE LANE NATIONAL HIGHWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE FOUR-LANE NH/SH CAN BE UPTO 3200 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE SINGLE LANE NH CAN BE UPTO 400 PCUS/HOUR.
3. WHERE THE SIDE ROAD INTERSECTS THE MAIN ROAD AT ANGLES GREATER THAN 60°, THE ARRANGEMENT SHOWN AS A IN THE KEY PLAN CAN BE ADOPTED. WHERE THE ANGLE IS LESS THAN 60°, DESIGN B OR C CAN BE ADOPTED.
4. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
6. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', I.R.C. 31-1969.
7. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
8. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
9. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

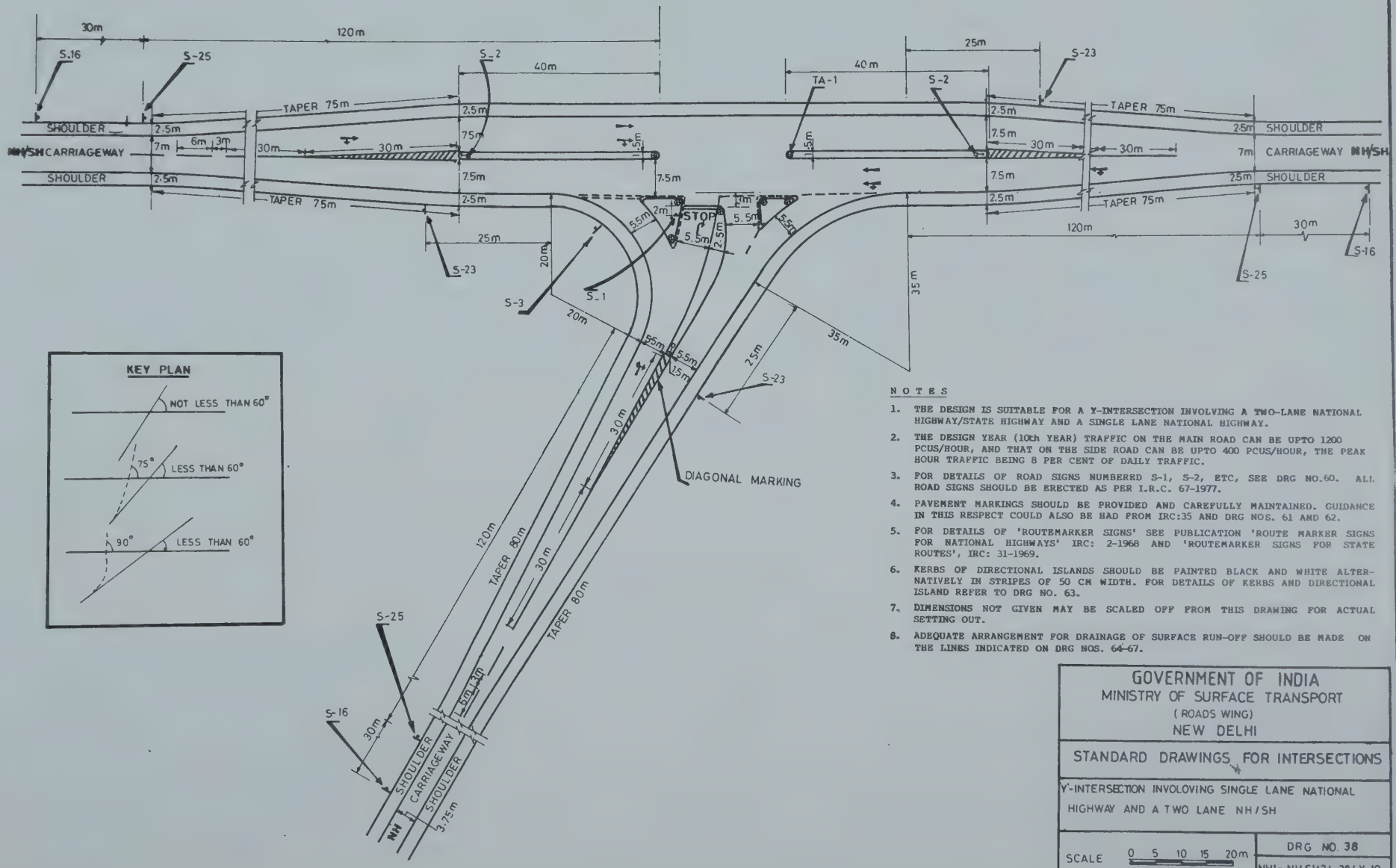
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

Y INTERSECTION INVOLVING FOUR LANE NATIONAL/ STATE HIGHWAY AND A SINGLE LANE NATIONAL HIGHWAY

SCALE 0 5 10 15 20m
1 : 500

DRG NO 37
NH1-NHSH/37/Y-9



NOTES

1. THE DESIGN IS SUITABLE FOR A Y-INTERSECTION INVOLVING A TWO-LANE NATIONAL HIGHWAY/STATE HIGHWAY AND A SINGLE LANE NATIONAL HIGHWAY.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE MAIN ROAD CAN BE UPTO 1200 PCUS/HOUR, AND THAT ON THE SIDE ROAD CAN BE UPTO 400 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC:35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC: 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

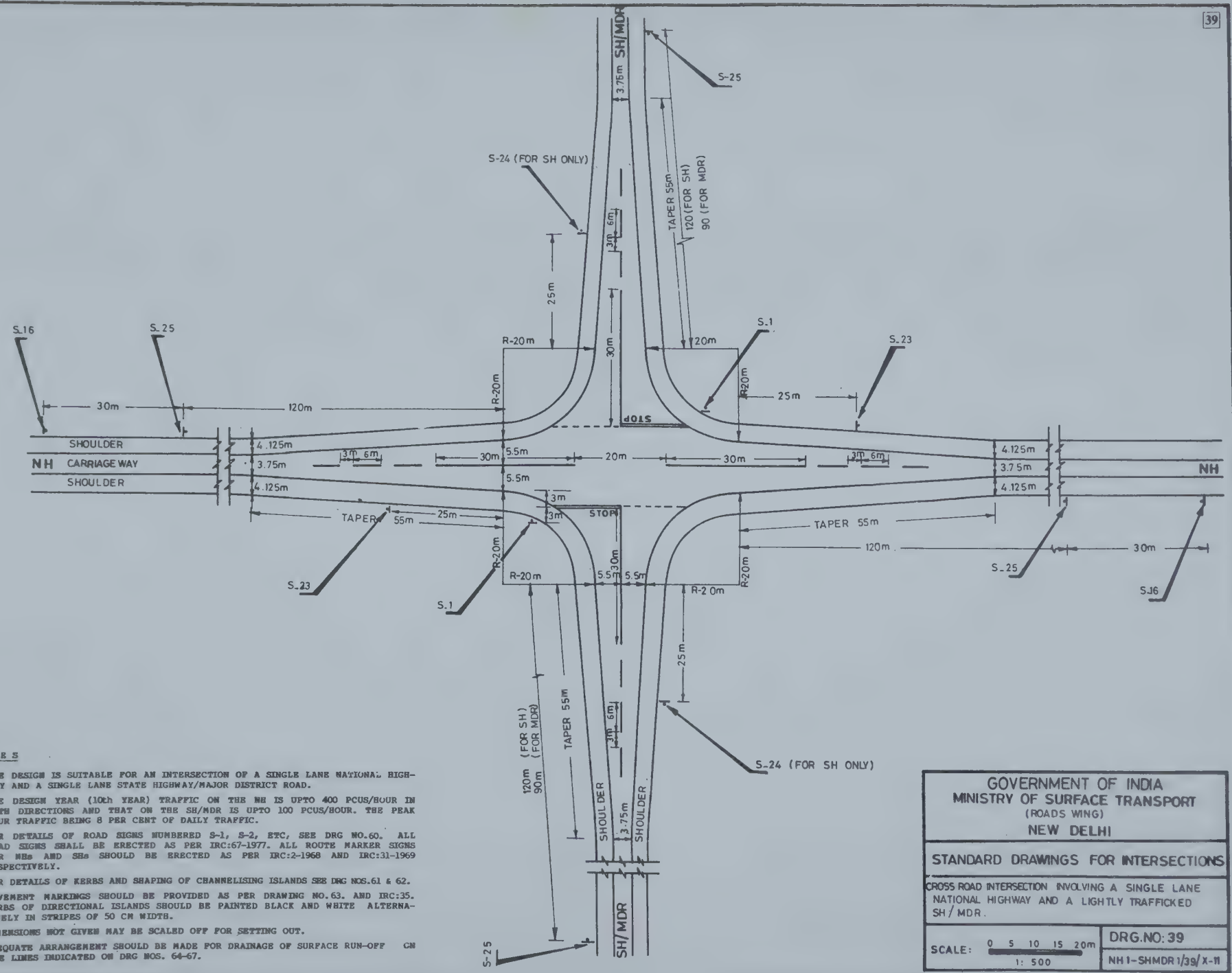
STANDARD DRAWINGS FOR INTERSECTIONS

'Y'-INTERSECTION INVOLOVING SINGLE LANE NATIONAL HIGHWAY AND A TWO LANE NH/SH

SCALE 0 5 10 15 20m
1:500

DRG NO. 38

NH1-NHSH2/38/Y-10



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A SINGLE LANE NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 400 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE SH/MDR IS UPTO 100 PCUS/HOUR. THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC:67-1977. ALL ROUTE MARKER SIGNS FOR NHs AND SHs SHOULD BE ERECTED AS PER IRC:2-1968 AND IRC:31-1969 RESPECTIVELY.
4. FOR DETAILS OF KERBS AND SHAPING OF CHANNELISING ISLANDS SEE DRG NOS.61 & 62.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRAWING NO.63. AND IRC:35. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
7. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

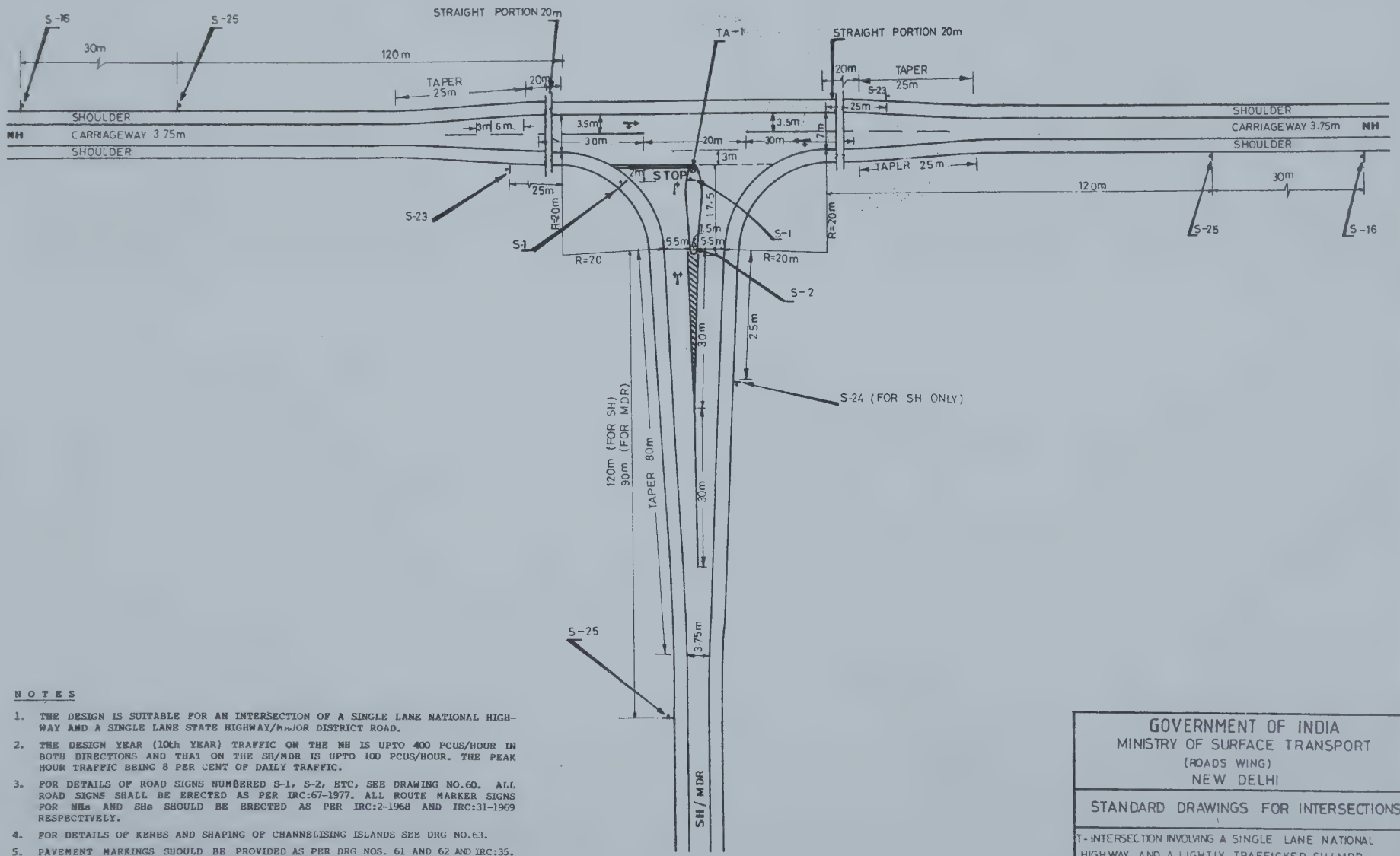
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION INVOLVING A SINGLE LANE NATIONAL HIGHWAY AND A LIGHTLY TRAFFICKED SH / MDR.

SCALE: 0 5 10 15 20m
1: 500

DRG.NO: 39
NH 1-SHMDR 1/39/X-11



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A SINGLE LANE NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 400 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE SH/MDR IS UPTO 100 PCUS/HOUR. THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC:67-1977. ALL ROUTE MARKER SIGNS FOR NHs AND SHs SHOULD BE ERECTED AS PER IRC:2-1968 AND IRC:31-1969 RESPECTIVELY.
4. FOR DETAILS OF KERBS AND SHAPING OF CHANNELISING ISLANDS SEE DRG NO.63.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AS PER DRG NOS. 61 AND 62 AND IRC:35. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
7. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

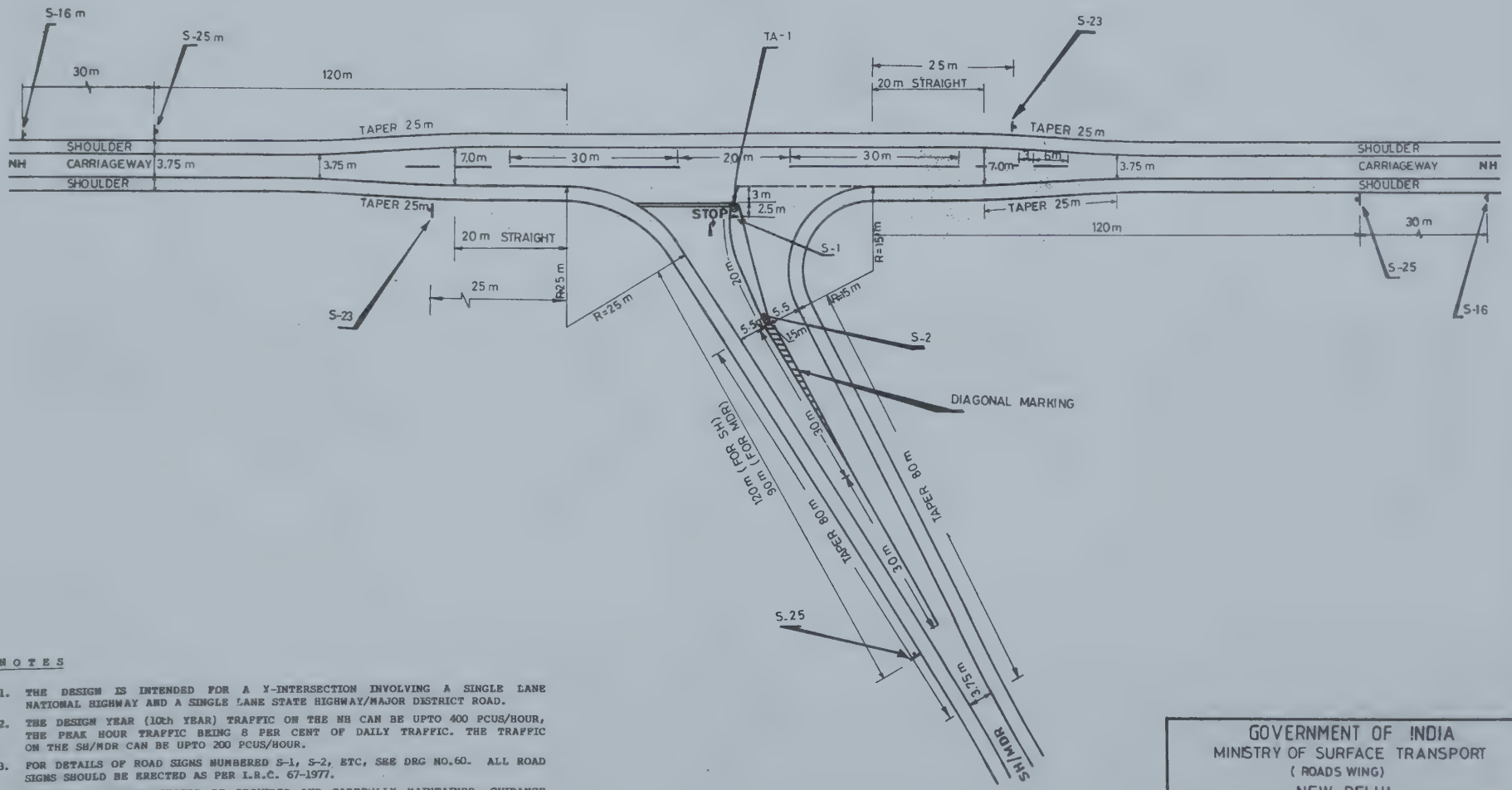
STANDARD DRAWINGS FOR INTERSECTIONS

T-INTERSECTION INVOLVING A SINGLE LANE NATIONAL HIGHWAY AND A LIGHTLY TRAFFICKED SH/MDR

SCALE 0 5 10 15 20m
1 500

DRG NO 40

NH1-SHMDR1/40/T-10



NOTES

1. THE DESIGN IS INTENDED FOR A Y-INTERSECTION INVOLVING A SINGLE LANE NATIONAL HIGHWAY AND A SINGLE LANE STATE HIGHWAY/MAJOR DISTRICT ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH CAN BE UPTO 400 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC ON THE SH/MDR CAN BE UPTO 200 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC-35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES', IRC 31-1969.
6. KERBS OF DIRECTIONAL ISLAND SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

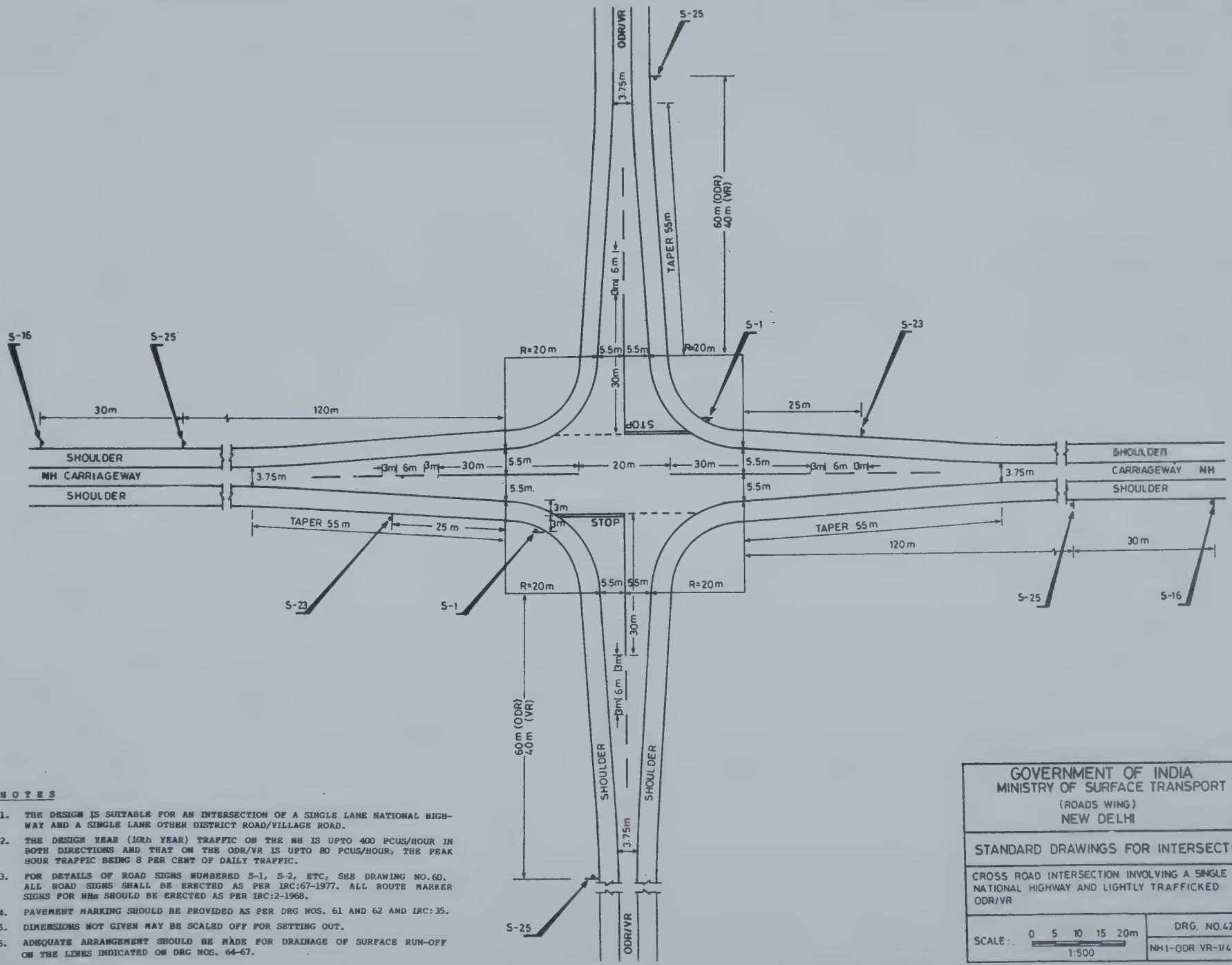
STANDARD DRAWINGS FOR INTERSECTIONS

'Y' INTERSECTION INVOLVING SINGLE-LANE NATIONAL HIGHWAY AND LIGHTLY TRAFFICKED SH/MDR

SCALE 0 5 10 15 20 m

DRG NO. 41

NH1_SHMDR1/41/Y.11



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A SINGLE LANE NATIONAL HIGHWAY AND A SINGLE LANE OTHER DISTRICT ROAD/VILLAGE ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 400 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE ODR/VR IS UPTO 80 PCUS/HOUR, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SIGNS SHALL BE ERECTED AS PER IRC:67-1977. ALL ROUTE MARKER SIGNS FOR NHs SHOULD BE ERECTED AS PER IRC:2-1968.
4. PAVEMENT MARKING SHOULD BE PROVIDED AS PER DRG NOS. 61 AND 62 AND IRC:35.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
6. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

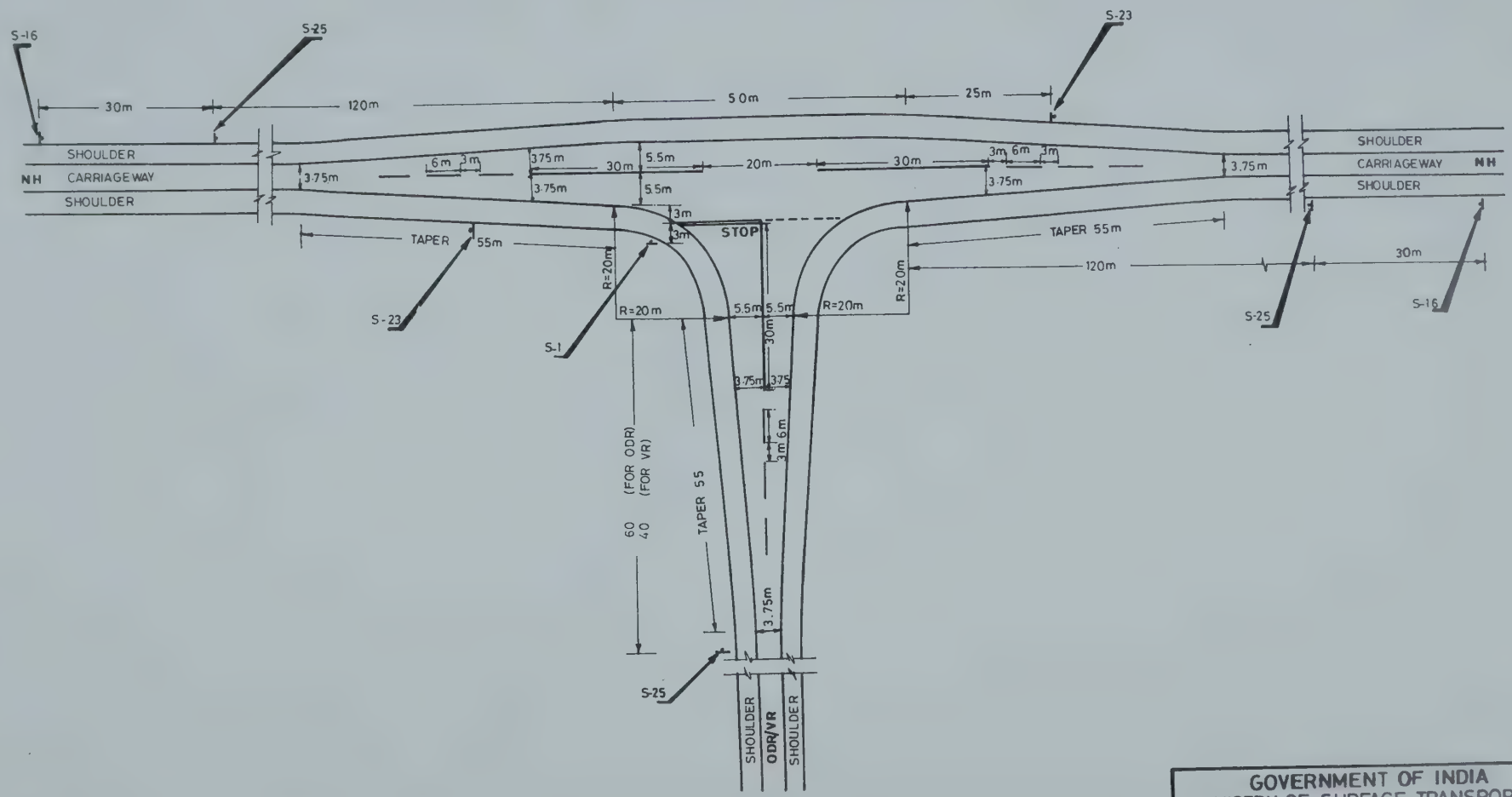
STANDARD DRAWINGS FOR INTERSECTIONS

CROSS ROAD INTERSECTION INVOLVING A SINGLE LANE NATIONAL HIGHWAY AND LIGHTLY TRAFFICKED ODR/VR

SCALE: 0 5 10 15 20m
1:500

DRG. NO.42

NH1-ODR VR-1/42/X-12



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A SINGLE LANE NATIONAL HIGHWAY AND A SINGLE LANE OTHER DISTRICT ROAD/VILLAGE ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE NH IS UPTO 400 PCUS/HOUR IN BOTH DIRECTIONS AND THAT ON THE ODR/VR IS UPTO 80 PCUS/HOUR. THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRAWING NO.60. ALL ROAD SINGS SHALL BE ERECTED AS PER IRC:67-1977. ALL ROUTE MARKER SIGNS FOR NHs SHOULD BE ERECTED AS PER IRC:2-1968.
4. PAVEMENT MARKING SHOULD BE PROVIDED AS PER DRG NOS. 61 AND 62 AND IRC:35.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FOR SETTING OUT.
6. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

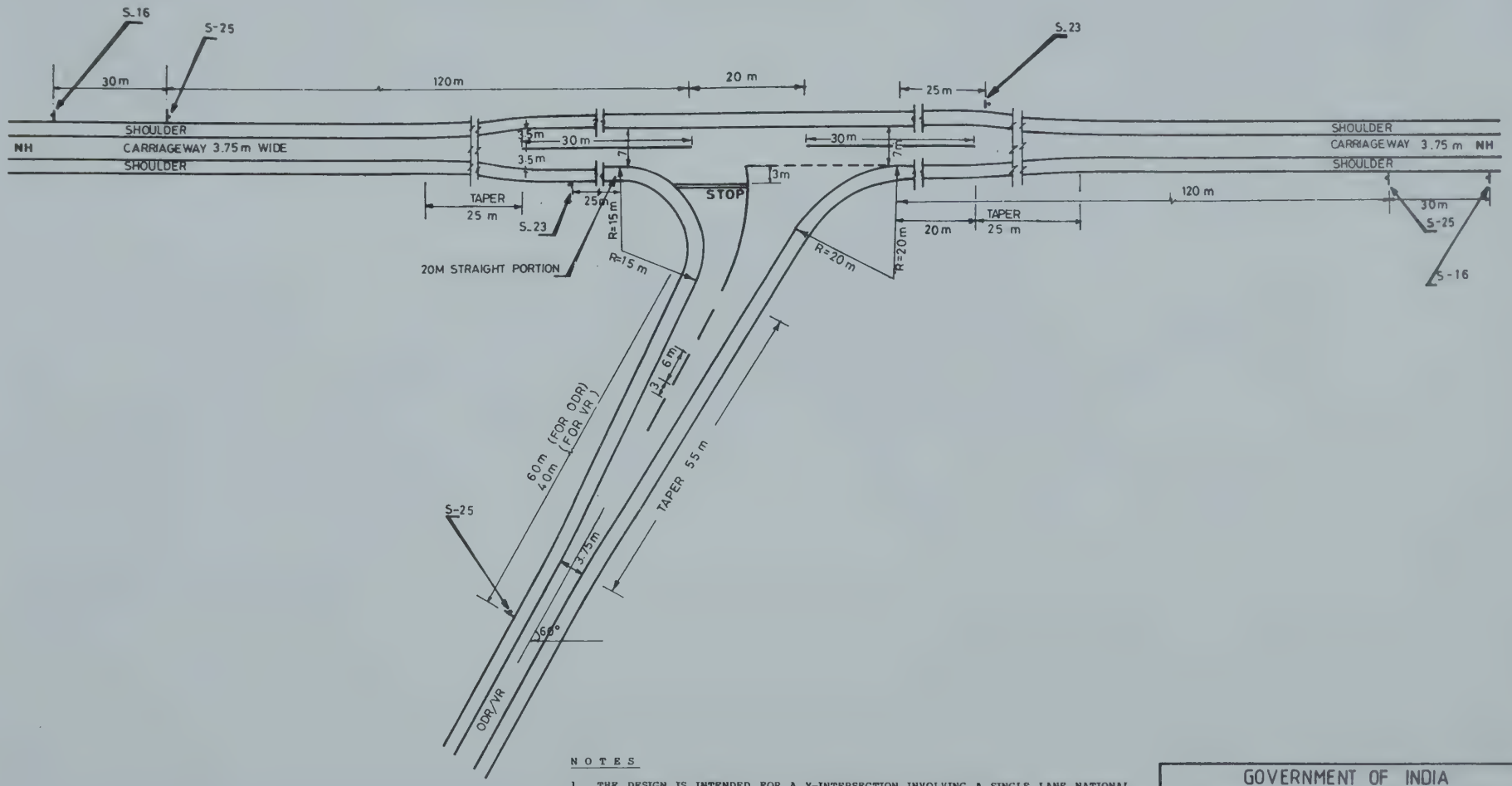
STANDARD DRAWINGS OF INTERSECTIONS

T-INTERSECTION INVOLVING A SINGLE LANE NATIONAL HIGHWAY AND A LIGHTLY TRAFFICKED ODR/VR

SCALE: 0 5 10 15 20m

DRG NO. 43

NH1-ODR VR-1/43/T-11



NOTES

1. THE DESIGN IS INTENDED FOR A Y-INTERSECTION INVOLVING A SINGLE LANE NATIONAL HIGHWAY AND A SINGLE LANE OTHER DISTRICT ROAD/VILLAGE ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON THE MAIN NH CAN BE UPTO 400 PCUS/HOUR, THE PEAK TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC. THE TRAFFIC OF THE ODR/VR CAN BE UPTO 80 PCUS/HOUR.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61 AND 62.
5. FOR DETAIS OF 'ROUTE MARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC: 2-1968.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
7. ADEQUATE ARRANGEMENT SHOULD BE MADE FOR DRAINAGE OF SURFACE RUN-OFF ON THE LINES INDICATED ON DRG NOS. 64-67.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

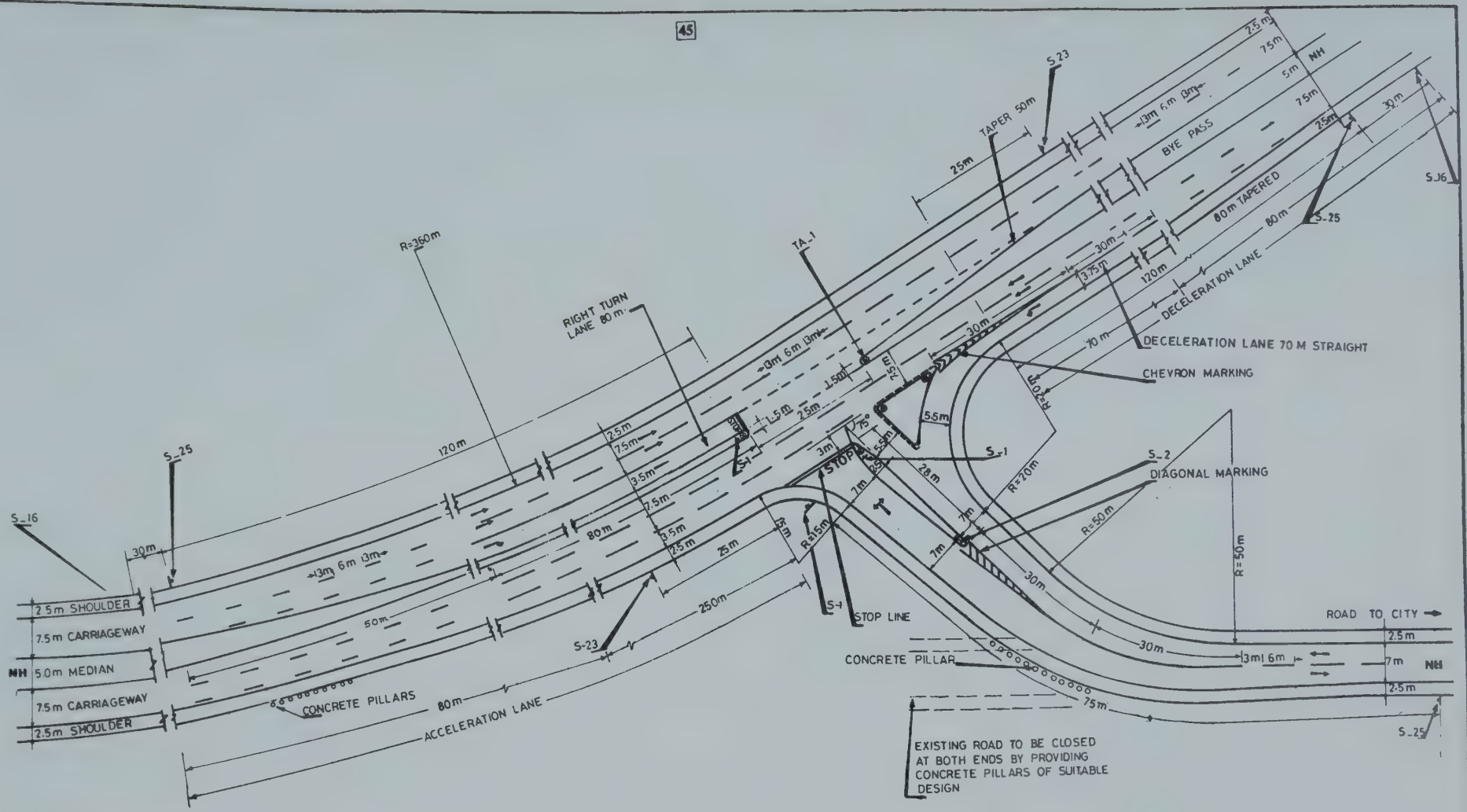
STANDARD DRAWINGS FOR INTERSECTIONS

Y-INTERSECTION INVOLVING SINGLE LANE NATIONAL HIGHWAY AND A SINGLE LANE ODR/VR

SCALE 0 5 10 15 20m
1 500

DRG NO 44

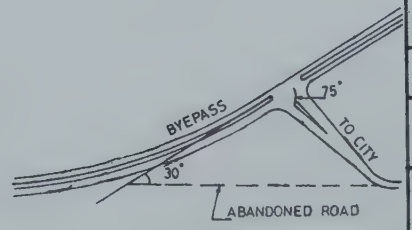
NH1-ODR VR1/44/Y-12



NOTES

1. THE DESIGN IS SUITABLE FOR THE JUNCTION OF A NATIONAL HIGHWAY BYEPASS AND THE ROAD TO THE CITY/TOWN. THE NH HAS A FOUR-LANE DIVIDED CARRIAGEWAY AND THE ROAD TO THE CITY/TOWN HAS A TWO-LANE CARRIAGEWAY.
2. THE BYEPASS TAKES OFF AT AN ANGLE OE 30°. THE ROAD TO THE CITY/TOWN IS REALIGNED SUCH THAT IT MEETS THE BYEPASS AT AN ANGLE OF 75°.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC:35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC:2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

INDEX PLAN



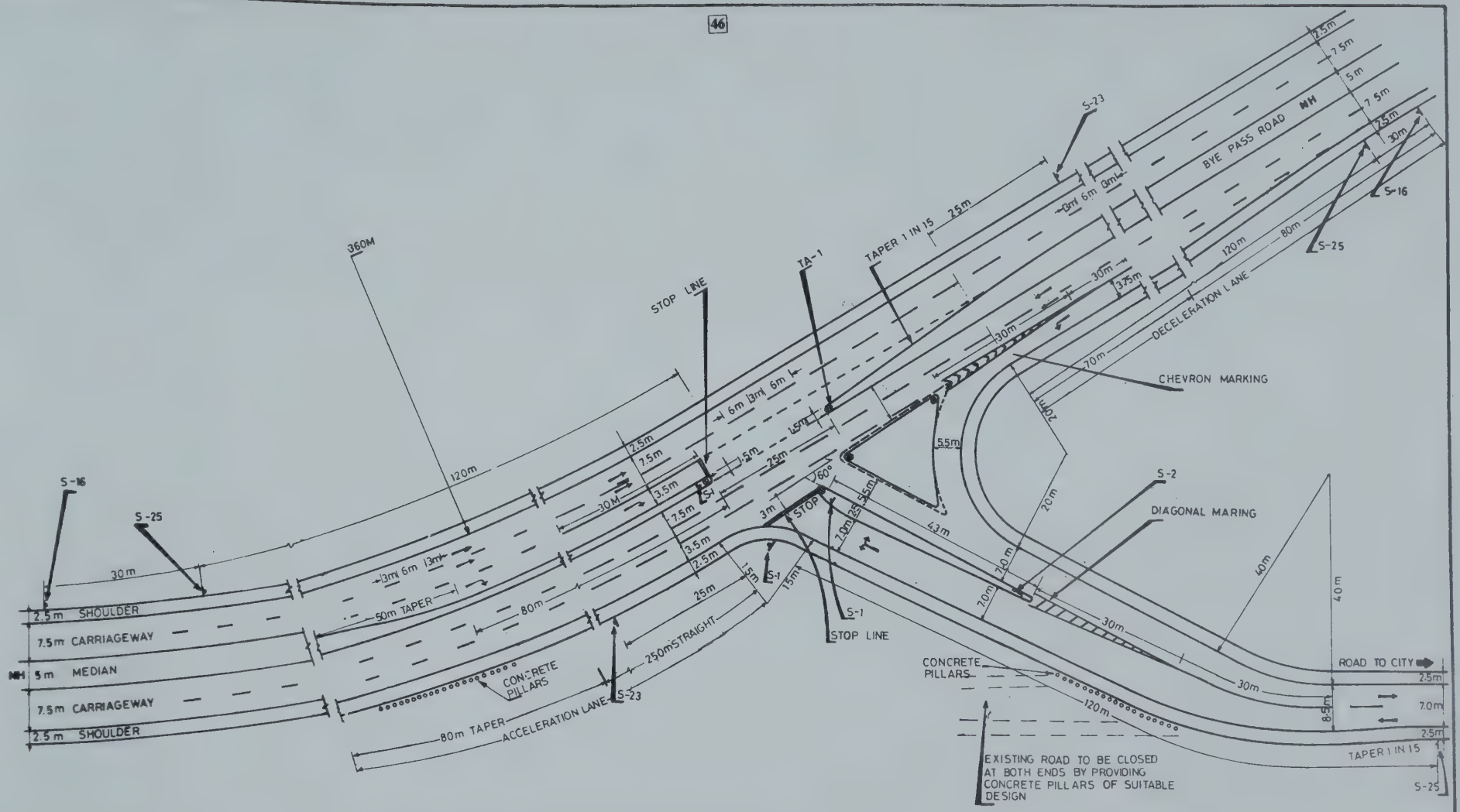
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

DETAILS OF INTERSECTION AT BYE-PASS TAKE-OFF INVOLVING A FOUR-LANE NATIONAL HIGHWAY (30° TAKE-OFF ANGLE) AND TWO-LANE ROAD TO CITY/TOWN

SCALE: 0 5 10 15 20m
1:500

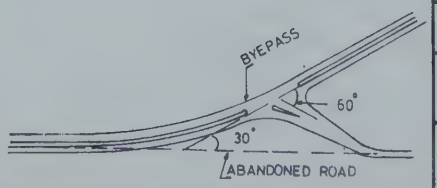
DRG NO 45
NH4-CR2/45/B-1



NOTES

1. THE DESIGN IS SUITABLE FOR THE JUNCTION OF A NATIONAL HIGHWAY BYEPASS AND THE ROAD TO THE CITY/TOWN. THE NH HAS A FOUR-LANE DIVIDED CARRIAGEWAY AND THE ROAD TO THE CITY/TOWN HAS A TWO-LANE CARRIAGEWAY.
2. THE BYEPASS TAKES OFF AT AN ANGLE OF 30°. THE ROAD TO THE CITY/TOWN IS REALIGNED SUCH THAT IT MEETS THE BYEPASS AT AN ANGLE OF 60°.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC:35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC:2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

INDEX PLAN



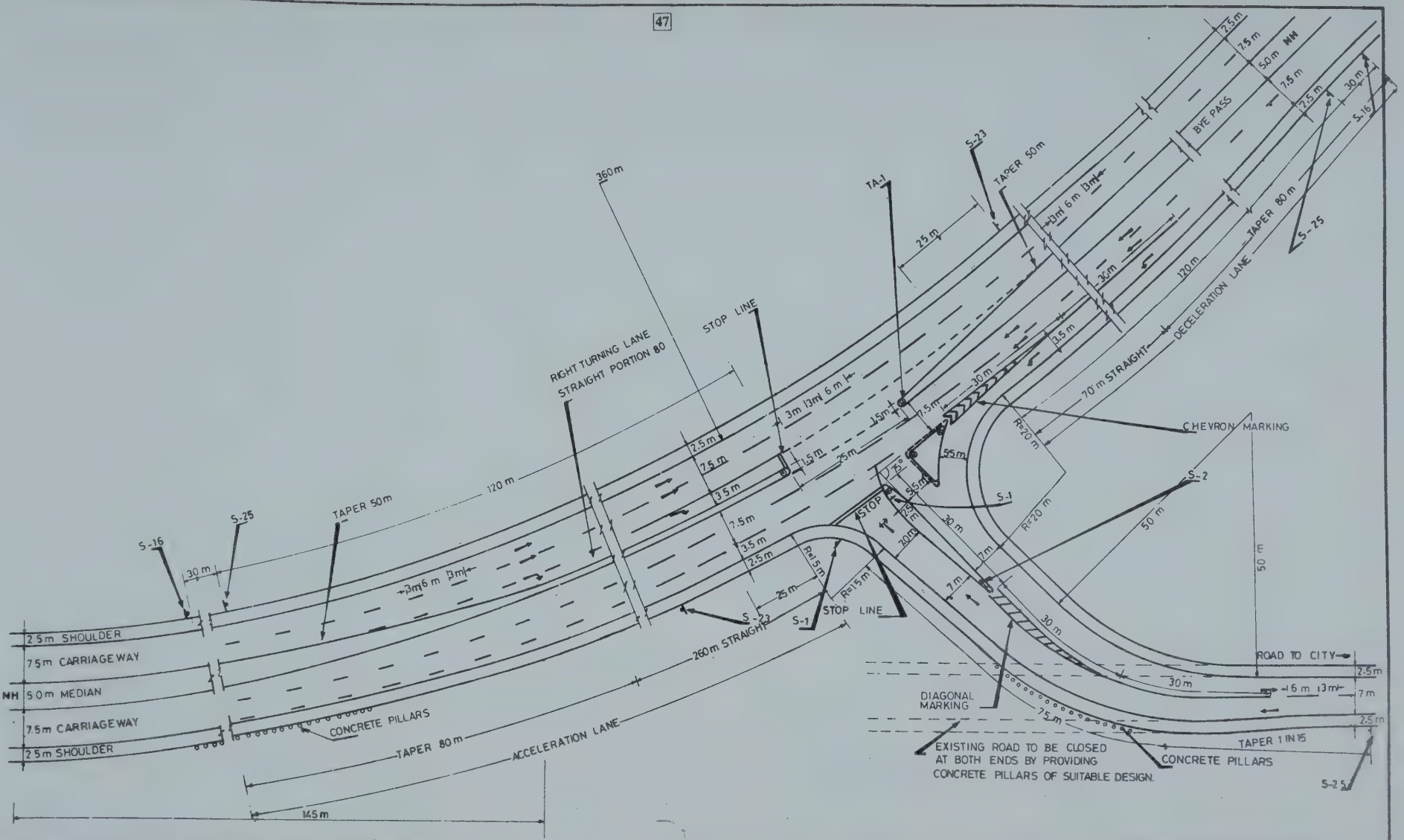
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

DETAILS OF INTERSECTION AT BYE PASS TAKE-OFF INVOLVING A FOUR-LANE NATIONAL HIGHWAY (30° TAKE-OFF ANGLE) AND TWO-LANE ROAD TO CITY/TOWN

SCALE 0 5 10 15 20m
1 500

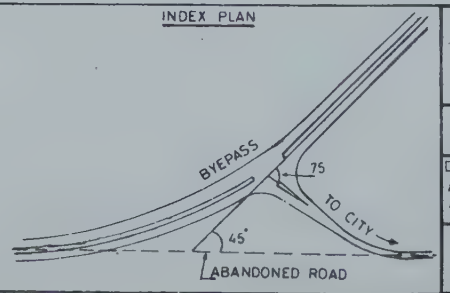
DRG NO 46
NH 4 - CR 2 / 46 / B - 2



NOTES

1. THE DESIGN IS SUITABLE FOR THE JUNCTION OF A NATIONAL HIGHWAY BYEPASS AND THE ROAD TO THE CITY/TOWN. THE NH HAS A FOUR-LANE DIVIDED CARRIAGEWAY AND THE ROAD TO THE CITY/TOWN HAS A TWO-LANE CARRIAGEWAY.
2. THE BYEPASS TAKES OFF AT AN ANGLE OF 45°. THE ROAD TO THE CITY/TOWN IS REALIGNED SUCH THAT IT MEETS THE BYEPASS AT AN ANGLE OF 75°.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC: 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC: 2-1968.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

INDEX PLAN



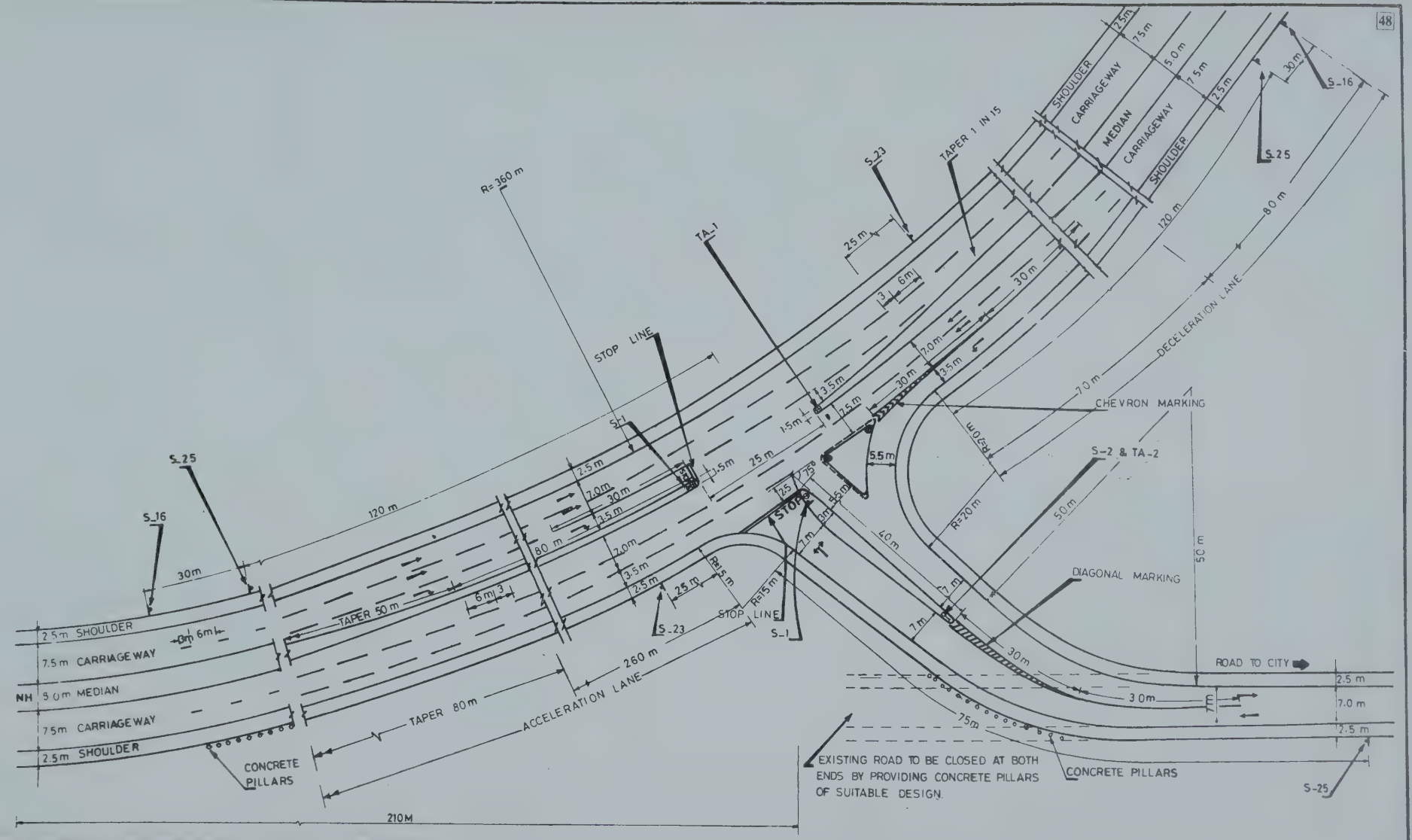
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWING FOR INTERSECTIONS

DETAILS OF INTERSECTION AT BY-PASS TAKE-OFF INVOLVING A FOUR-LANE NATIONAL HIGHWAY (45° TAKE OFF ANGLE) AND A TWO-LANE ROAD TO CITY/TOWN

SCALE 0 5 10 15 20m
1 500

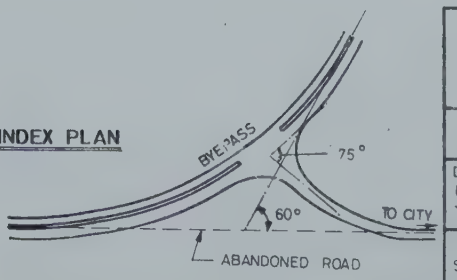
DRG NO 47
NH 4-CR 2 /47/B-3



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGE-WAY BYEPASS ON A NATIONAL HIGHWAY.
2. THE TAKE-OFF ANGLE OF THE BYEPASS IS 60°. THE ROAD TO THE CITY IS REALIGNED SO AS TO MEET THE BYEPASS AT AN ANGLE OF 75°.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH . FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO.63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

INDEX PLAN



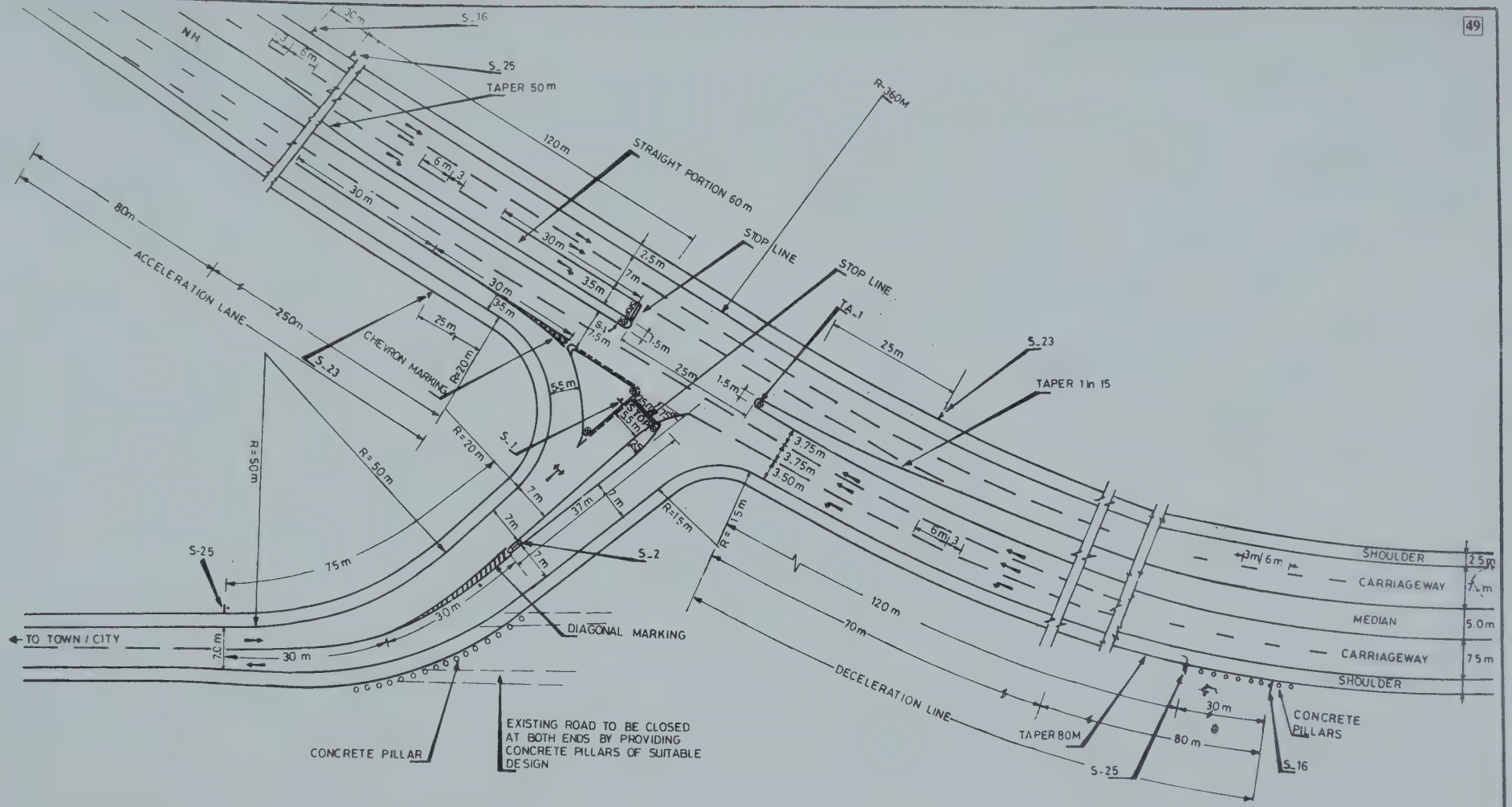
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS FOR INTERSECTIONS

DETAILS OF INTERSECTION AT BYE PASS TAKE OFF INVOLVING A FOUR-LANE NATIONAL HIGHWAY (60° TAKE-OFF ANGLE) AND A TWO LANE ROAD TO CITY/TOWN

SCALE 0 5 10 15 20m
1 500

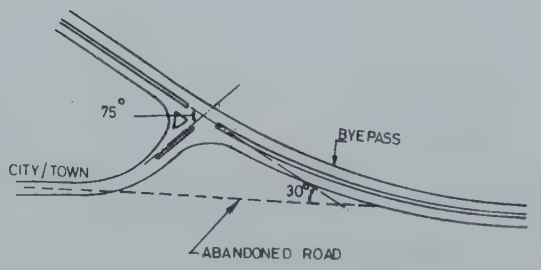
DRG NO 48
NH4-CR2/48/B-4



NOTES

1. THE DESIGN IS SUITABLE FOR THE INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY BYEPASS ON A NATIONAL HIGHWAY.
2. THE TAKE-OFF ANGLE OF THE BYEPASS IS 30°. THE ROAD TO THE CITY IS REALIGNED SO AS TO MEET THE BYEPASS AT AN ANGLE OF 75°.
3. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER IRC 67-1977.
4. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
5. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS', IRC 2-1968.
6. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
7. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
8. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

INDEX PLAN



GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

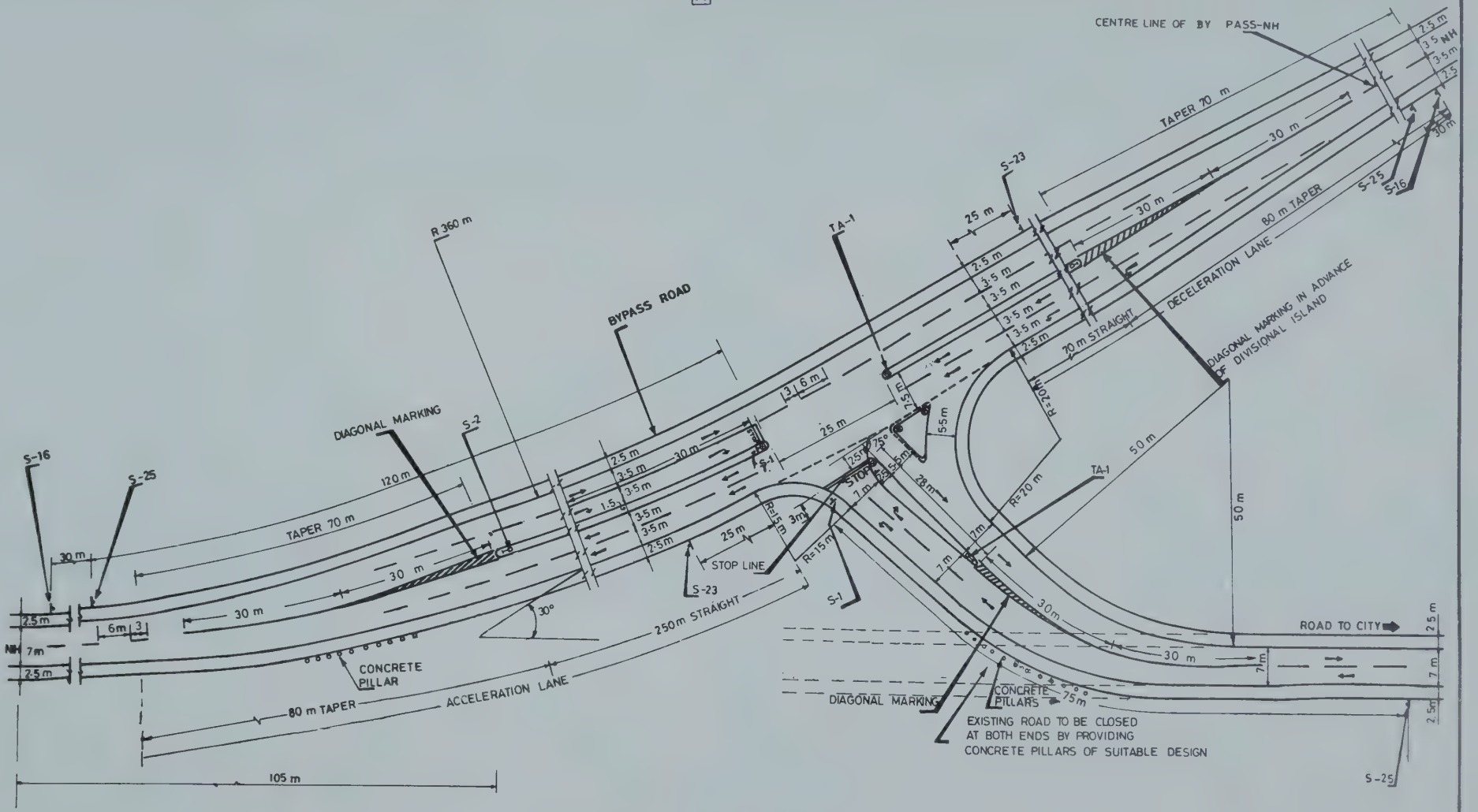
STANDARD DRAWINGS FOR INTERSECTIONS

DETAILS OF INTERSECTION AT BYE-PASS TAKE OFF INVOLVING A FOUR-LANE NATIONAL HIGHWAY (30° TAKE-OFF ANGLE) AND A TWO-LANE ROAD TO CITY/TOWN

SCALE 0 5 10 15 20m
1:500

DRG NO 49

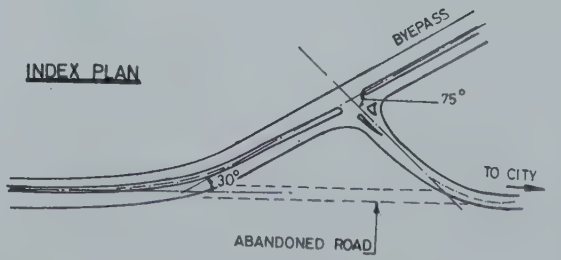
NH4-CR2/49/B-5



NOTES

1. THE DESIGN IS SUITABLE FOR THE JUNCTION OF A TWO-LANE BYEPASS AND A TWO-LANE ROAD TO THE CITY/TOWN WHERE THE TAKE-OFF ANGLE IS 30°. THE ROAD TO THE CITY/TOWN IS REALIGNED SO AS TO MEET THE BYEPASS AT AN ANGLE OF 75°.
2. FOR DETAILS OF ROAD SIGNS NUMBERED S-1, S-2, ETC, SEE DRG NO.60. ALL ROAD SIGNS SHOULD BE ERECTED AS PER I.R.C. 67-1977.
3. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC 35 AND DRG NOS. 61 AND 62.
4. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTEMARKER SIGNS FOR NATIONAL HIGHWAYS' IRC 2-1968 AND 'ROUTEMARKER SIGNS FOR STATE ROUTES' IRC 31-1969.
5. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
6. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
7. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.

INDEX PLAN



GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

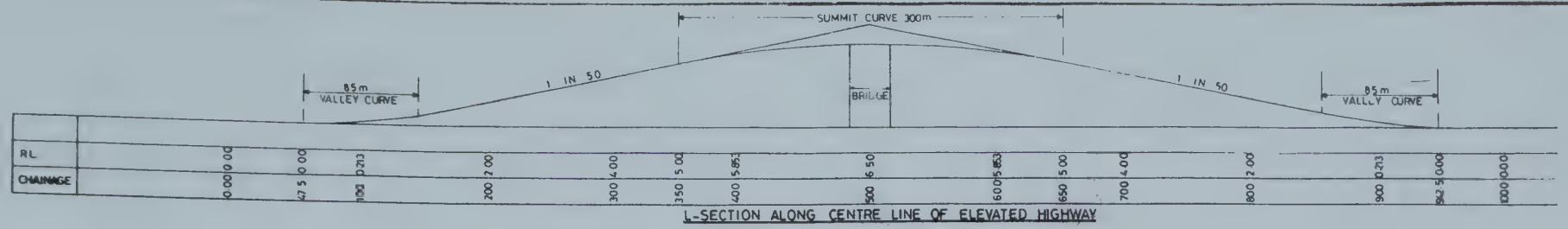
STANDARD DRAWINGS FOR INTERSECTIONS

DETAILS OF INTERSECTION AT BY PASS TAKE OFF INVOLVING A TWO-LANE NATIONAL HIGHWAY (30° TAKE-OFF ANGLE) AND A TWO-LANE CITY/TOWN ROAD

SCALE: 5 10 15 20m
1:500

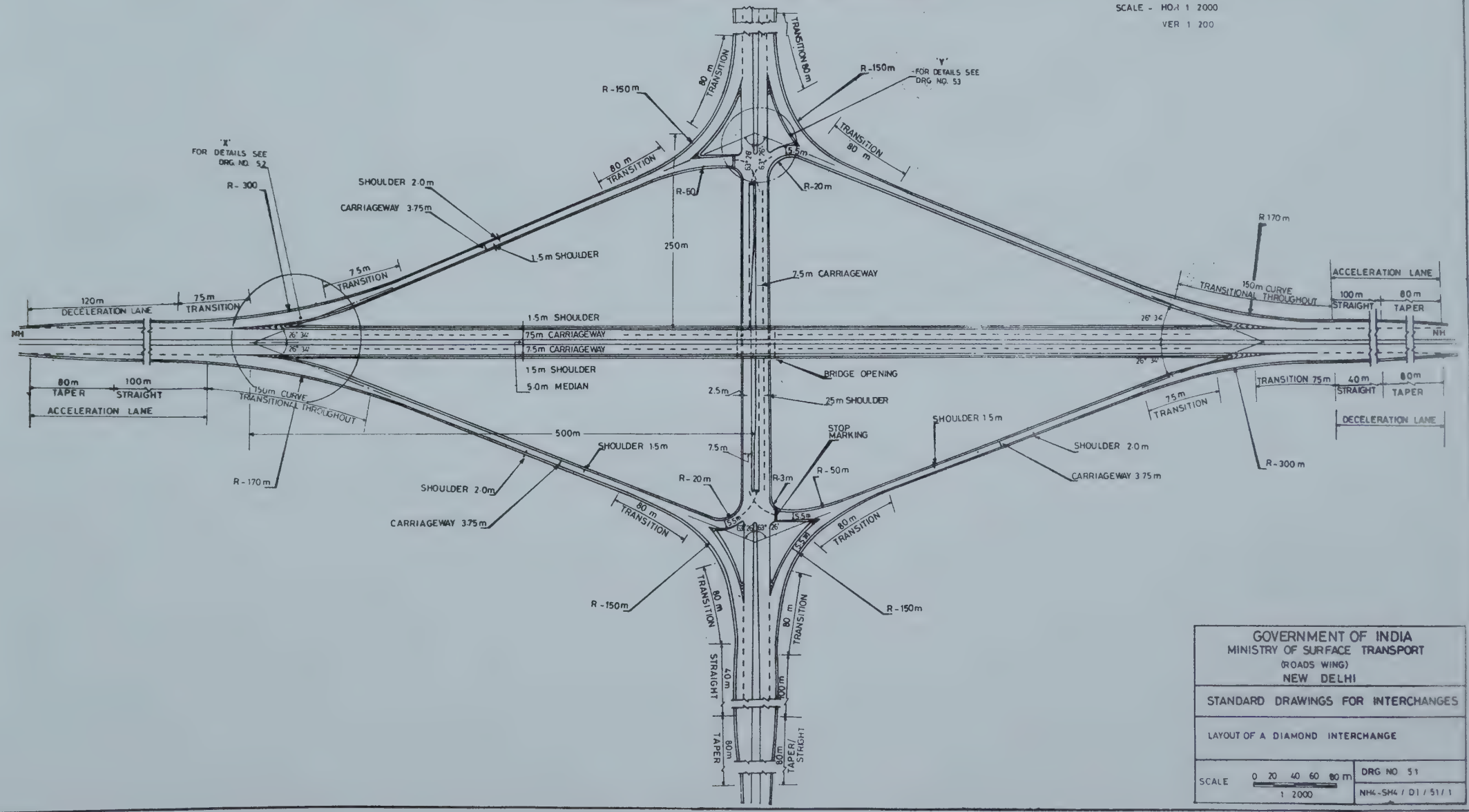
DRG NO. 50

NH2-CR2/50/B-6



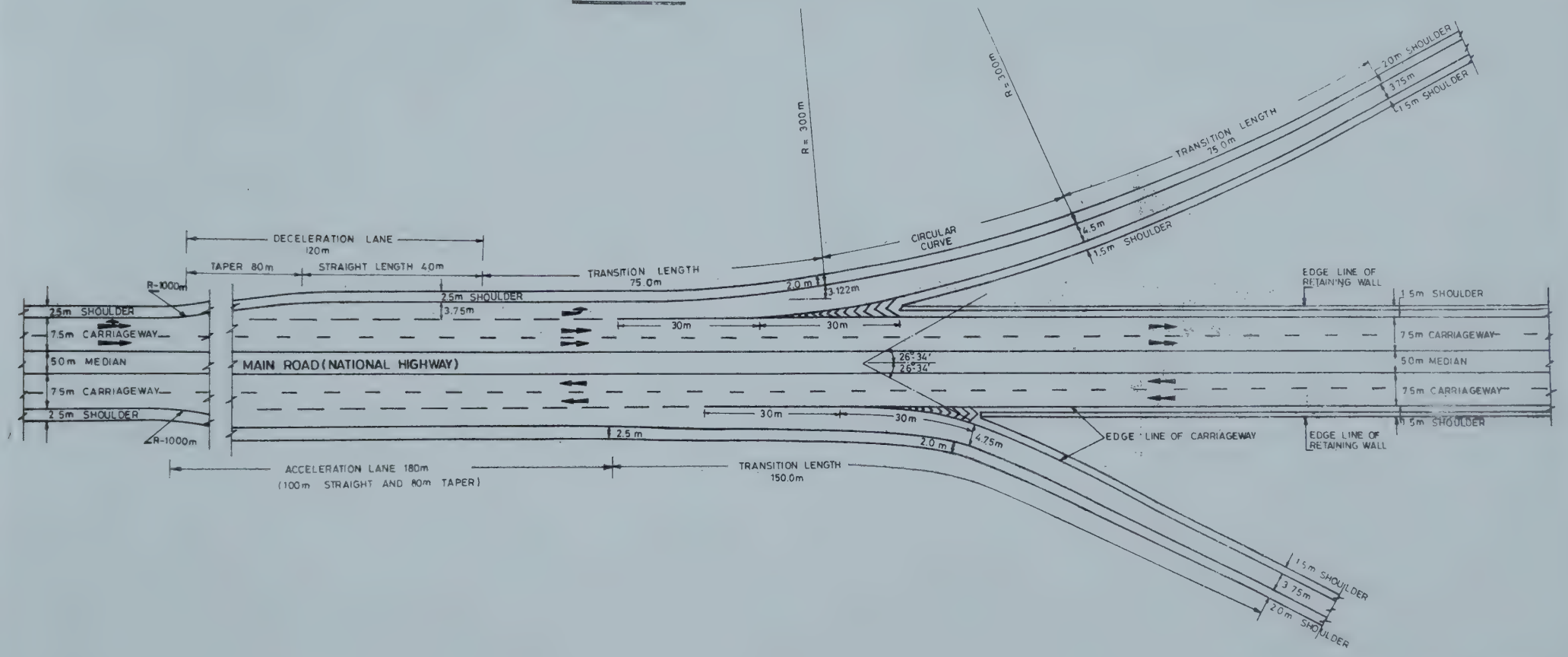
L-SECTION ALONG CENTRE LINE OF ELEVATED HIGHWAY

SCALE - HOR 1 2000
VER 1 200



GOVERNMENT OF INDIA MINISTRY OF SURFACE TRANSPORT (ROADS WING) NEW DELHI	
STANDARD DRAWINGS FOR INTERCHANGES	
LAYOUT OF A DIAMOND INTERCHANGE	
SCALE 0 20 40 60 80 m 1 2000	DRG NO 51 NH4-SH4 / D1 / 51 / 1

DETAILS AT 'X'



NOTES

1. THE DETAILS MAY BE READ IN CONJUNCTION WITH THE GENERAL LAYOUT DRG NO.51.
2. FOR DETAILS OF TRAFFIC MARKINGS SEE DRG NOS. 61 AND 62. GUIDANCE MAY ALSO BE HAD FROM IRC : 35.
3. THE GORE AREA SHOULD BE CLEAR OF HAZARDOUS OBSTRUCTIONS. WHERE THESE ARE PROVIDED, ENERGY DISSIPATING AND HAZARDOUS DEVICES MUST BE USED IN FRONT OF THEM.
4. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLANDS REFER TO DRG NO. 63.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

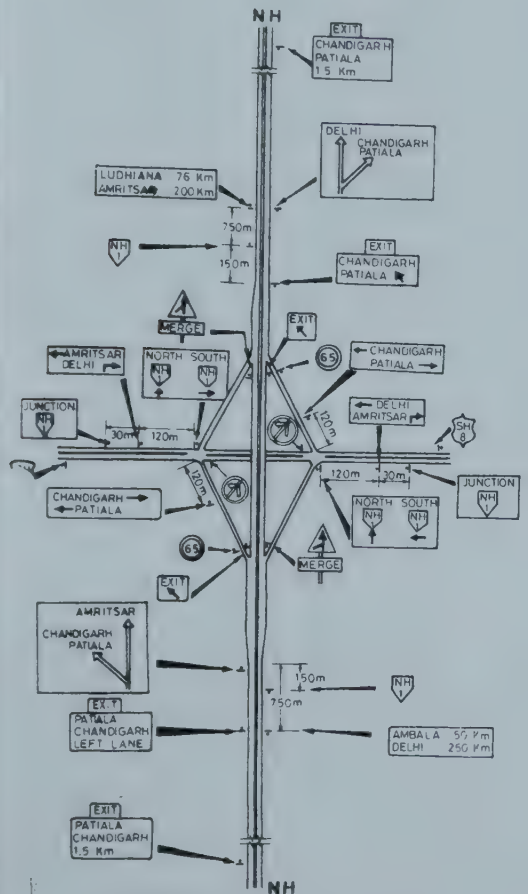
STANDARD DRAWINGS OF INTERCHANGES

DIAMOND INTERCHANGE
-DETAILS OF 'X' REFERRED IN DRG NO 51

SCALE: 0 5 10 15 20 25m
1,500

DRG. NO: 52

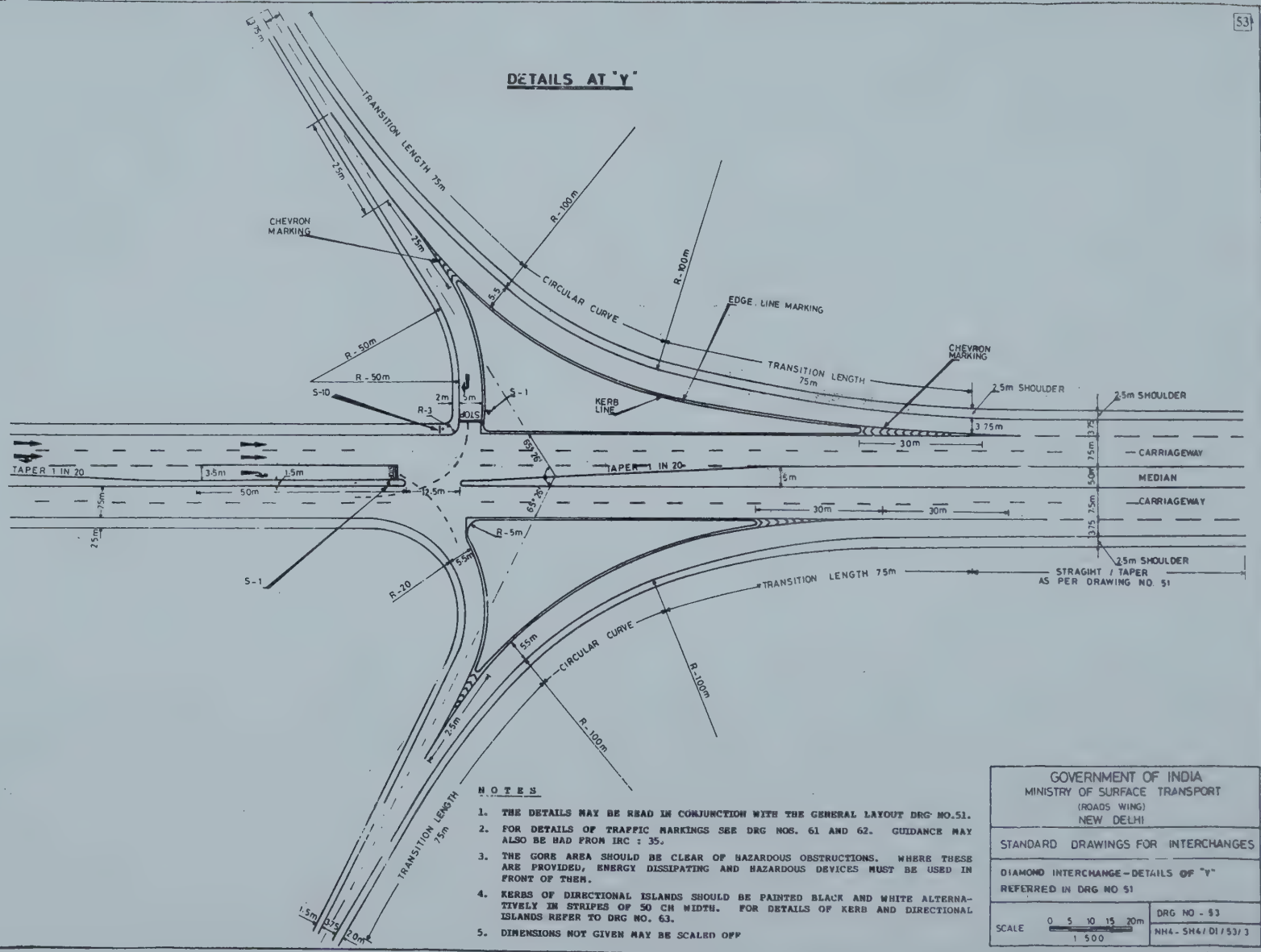
NH4-SH4/DW/52/2



SCHEMATIC DIAGRAM OF TRAFFIC SIGNS

(NOT TO SCALE)

DETAILS AT 'Y'



NOTES

1. THE DETAILS MAY BE READ IN CONJUNCTION WITH THE GENERAL LAYOUT DRG NO.51.
2. FOR DETAILS OF TRAFFIC MARKINGS SEE DRG NOS. 61 AND 62. GUIDANCE MAY ALSO BE HAD FROM IRC : 35.
3. THE GORE AREA SHOULD BE CLEAR OF HAZARDOUS OBSTRUCTIONS. WHERE THESE ARE PROVIDED, ENERGY DISSIPATING AND HAZARDOUS DEVICES MUST BE USED IN FRONT OF THEM.
4. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLANDS REFER TO DRG NO. 63.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

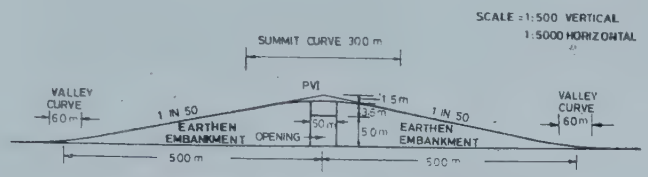
STANDARD DRAWINGS FOR INTERCHANGES

DIAMOND INTERCHANGE - DETAILS OF "Y" REFERRED IN DRG NO 51

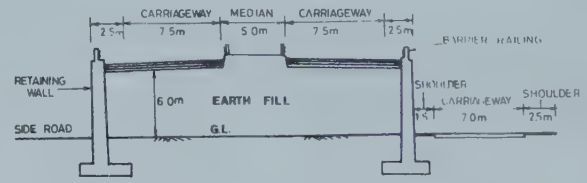
SCALE 0 5 10 15 20m
1 500

DRG NO - 53

NH4 - SH41/01/53/3

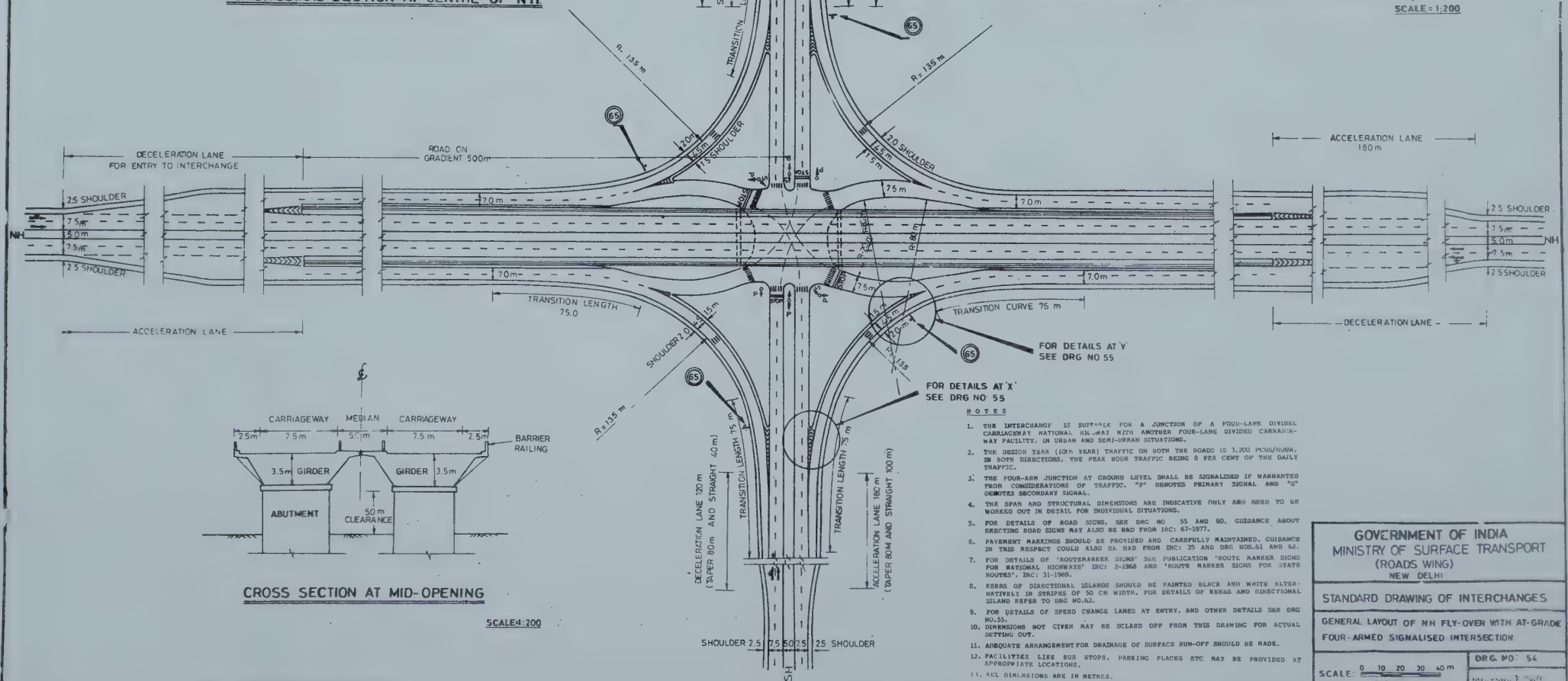


LONGITUDINAL SECTION AT CENTRE OF N.H.



CROSS-SECTION OF MAIN ROAD AT 200m FROM PVI

SCALE = 1:200



CROSS SECTION AT MID-OPENING

SCALE=1:200

NOTES

1. THE INTERCHANGE IS SUITABLE FOR A JUNCTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY WITH ANOTHER FOUR-LANE DIVIDED CARRIAGEWAY FACILITY, IN URBAN AND SEMI-URBAN SITUATIONS.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON BOTH THE ROADS IS 3,200 PCUS/HOUR, IN BOTH DIRECTIONS, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF THE DAILY TRAFFIC.
3. THE FOUR-ARM JUNCTION AT GROUND LEVEL SHALL BE SIGNALISED IF WARRANTED FROM CONSIDERATIONS OF TRAFFIC. "P" DENOTES PRIMARY SIGNAL AND "S" DENOTES SECONDARY SIGNAL.
4. THE SPAN AND STRUCTURAL DIMENSIONS ARE INDICATIVE ONLY AND NEED TO BE WORKED OUT IN DETAIL FOR INDIVIDUAL SITUATIONS.
5. FOR DETAILS OF ROAD SIGNS, SEE DRG NO 55 AND 60. GUIDANCE ABOUT ERECTING ROAD SIGNS MAY ALSO BE HAD FROM IRC: 67-1977.
6. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC: 35 AND DRG NOS.61 AND 62.
7. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC: 2-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC: 31-1969.
8. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 30 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO.63.
9. FOR DETAILS OF SPEED CHANGE LANES AT ENTRY, AND OTHER DETAILS SEE DRG NO.55.
10. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
11. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE.
12. FACILITIES LIKE BUS STOPS, PARKING PLACES ETC MAY BE PROVIDED AT APPROPRIATE LOCATIONS.
13. ALL DIMENSIONS ARE IN METRES.

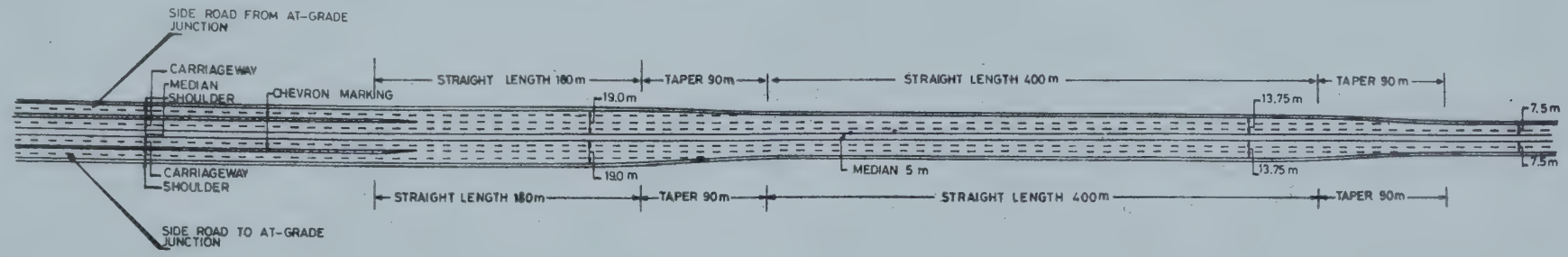
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWING OF INTERCHANGES

GENERAL LAYOUT OF NH FLY-OVER WITH AT-GRADE FOUR-ARMED SIGNALISED INTERSECTION

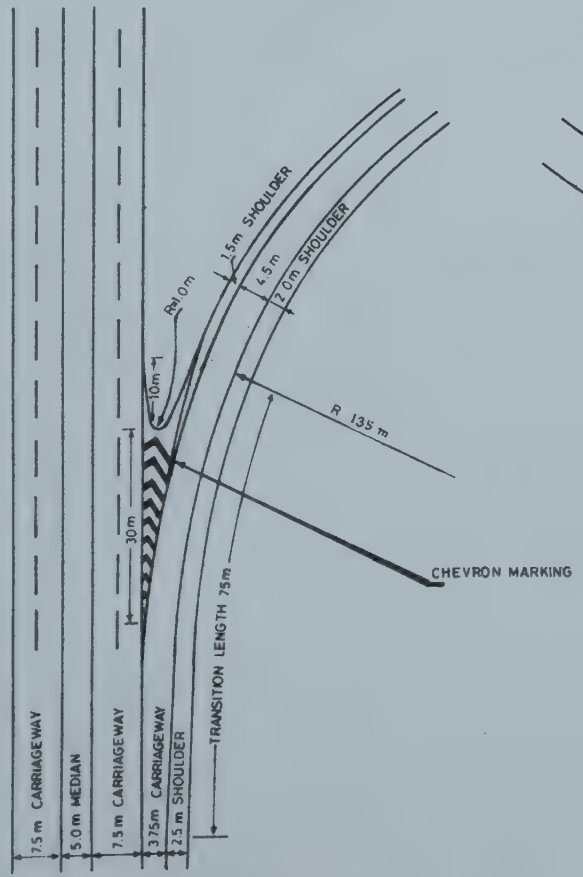
SCALE: 0 10 20 30 40 m
1:1000

DRG NO: 54



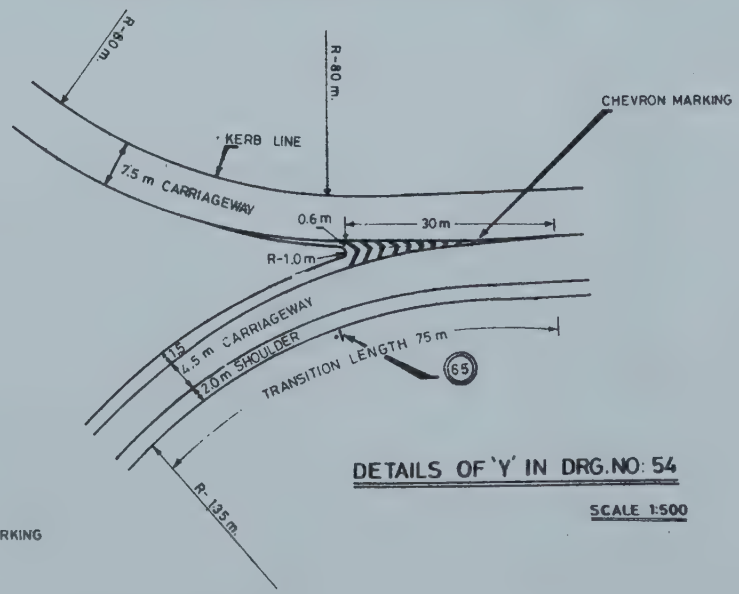
DETAILS OF SPEED CHANGE LANES AT ENTRY AND EXIT

SCALE 1:2000



DETAILS AT 'X' IN DRG. NO: 54

SCALE 1:500



DETAILS OF 'Y' IN DRG. NO: 54

SCALE 1:500

NOTES

1. THE DETAILS MAY BE READ IN CONJUNCTION WITH THE GENERAL LAYOUT DRG NO.54.
2. FOR DETAILS OF TRAFFIC MARKINGS SEE DRG NOS. 61 AND 62. GUIDANCE MAY ALSO BE HAD FROM IRC : 35.
3. THE CORE AREA SHOULD BE CLEAR OF HAZARDOUS OBSTRUCTIONS. WHERE THESE ARE PROVIDED, ENERGY DISSIPATING AND HAZARDOUSS DEVICES MUST BE USED IN FRONT OF THEM.
4. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLANDS REFER TO DRG NO. 63.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF.
6. THE DRAWING SHOWS TWO LANE SPEED CHANGE LANES FOR THE MAIN MS. WHERE SINGLE LANE SPEED CHANGE LANES ARE ADEQUATE SUITABLE ALTERATIONS NEED TO BE INCORPORATED.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

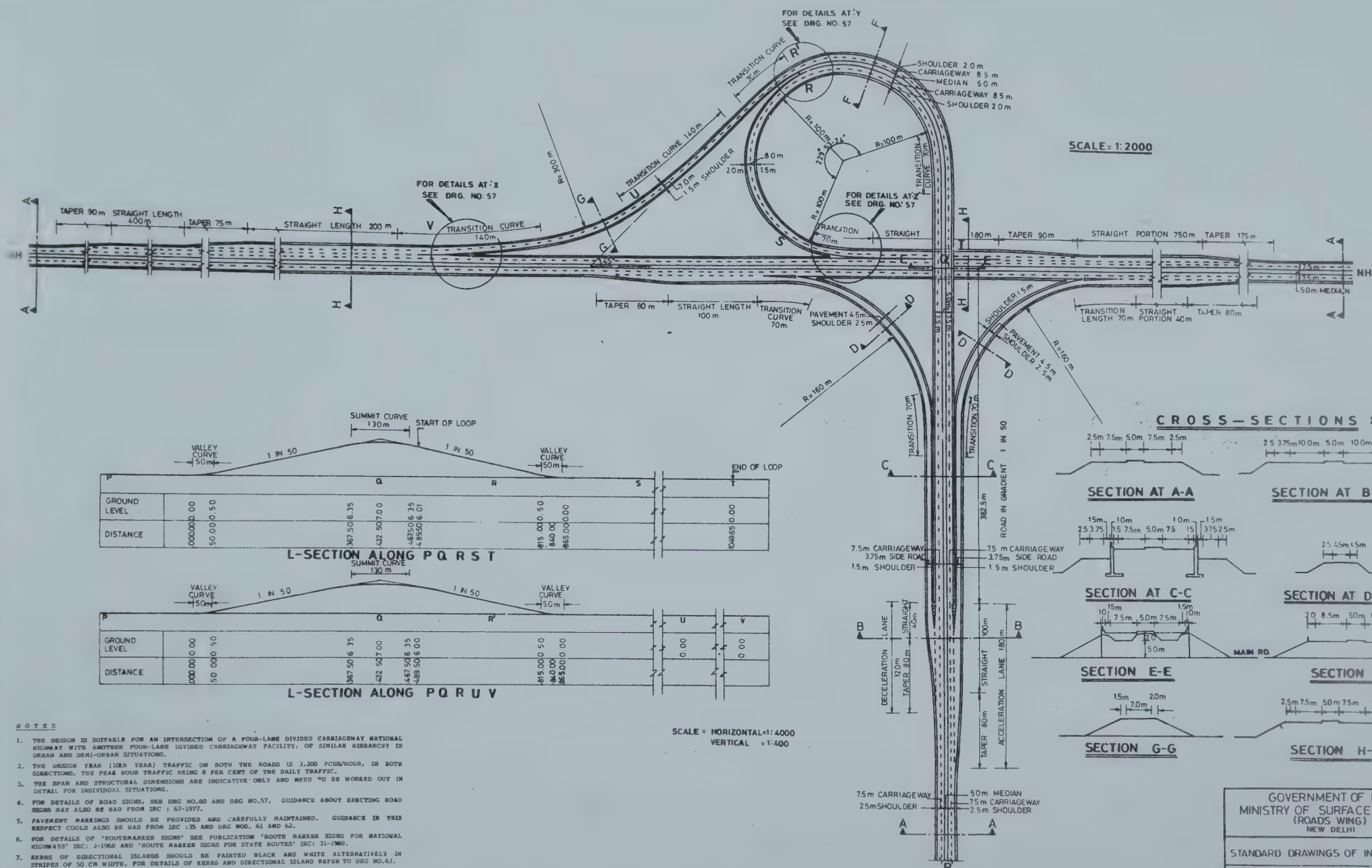
STANDARD DRAWINGS OF INTERSECTION

DETAILS OF SPEED CHANGE LANES AND ENTRY POINTS OF GRADE SEPARATED FLY-OVER WITH AT-GRADE INTERSECTION

SCALE : AS INDICATED

DRG. NO. 55

NH4-SH41F155/2

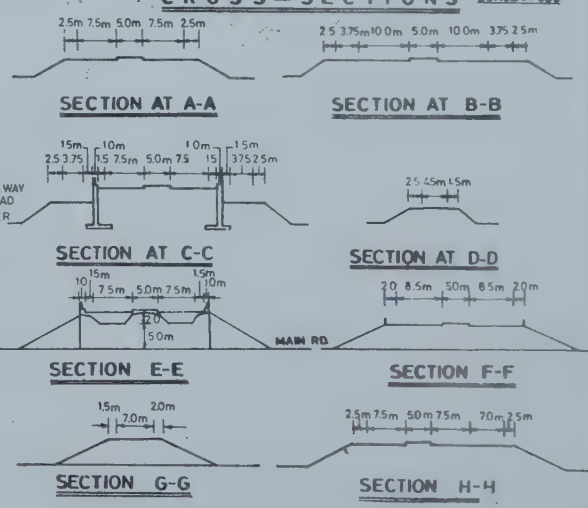


L-SECTION ALONG P Q R S T

L-SECTION ALONG P Q R U V

SCALE = HORIZONTAL = 1: 4000
VERTICAL = 1: 400

CROSS-SECTIONS SCALE = 1: 500



NOTES

1. THE DESIGN IS SUITABLE FOR AN INTERSECTION OF A FOUR-LANE DIVIDED CARRIAGEWAY NATIONAL HIGHWAY WITH ANOTHER FOUR-LANE DIVIDED CARRIAGEWAY FACILITY, OF SIMILAR HIERARCHY IN URBAN AND SEMI-URBAN SITUATIONS.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON BOTH THE ROADS IS 3,200 PCUS/HOUR, IN BOTH DIRECTIONS, THE PEAK HOUR TRAFFIC BEING 8 PER CENT OF THE DAILY TRAFFIC.
3. THE SPAN AND STRUCTURAL DIMENSIONS ARE INDICATIVE ONLY AND NEED TO BE WORKED OUT IN DETAIL FOR INDIVIDUAL SITUATIONS.
4. FOR DETAILS OF ROAD SIGNS, SEE DRG NO.60 AND DRG NO.57. GUIDANCE ABOUT ERECTING ROAD SIGNS MAY ALSO BE HAD FROM IRC : 67-1977.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULD ALSO BE HAD FROM IRC :35 AND DRG NOS. 61 AND 62.
6. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC: 5-1968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES' IRC: 31-1969.
7. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO.63.
8. DETAILS OF EXIT AND ENTRY AT 'X', 'Y' AND 'Z' ARE GIVEN IN DRG NO.57.
9. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
10. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE ON THE LINES INDICATED ON DRG NOS. 64-67.
11. BARRIER RAILINGS SHALL BE PROVIDED AT THE EDGES OF EMBANKMENTS ON GRADE.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

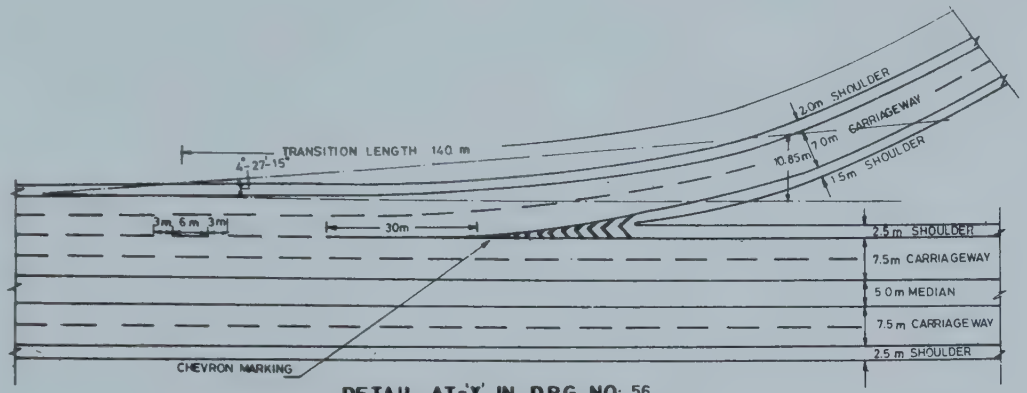
STANDARD DRAWINGS OF INTERCHANGES

GENERAL LAYOUT AND LONGITUDINAL PROFILE/ CROSS-SECTIONS OF TRUMPET INTERCHANGE

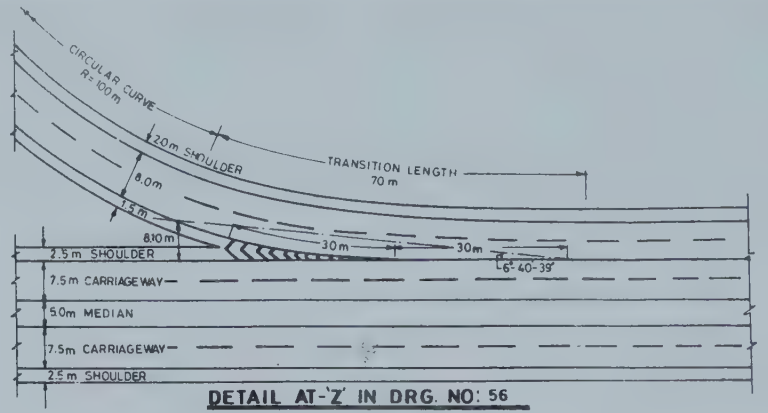
SCALE: AS INDICATED

DRG NO. 56

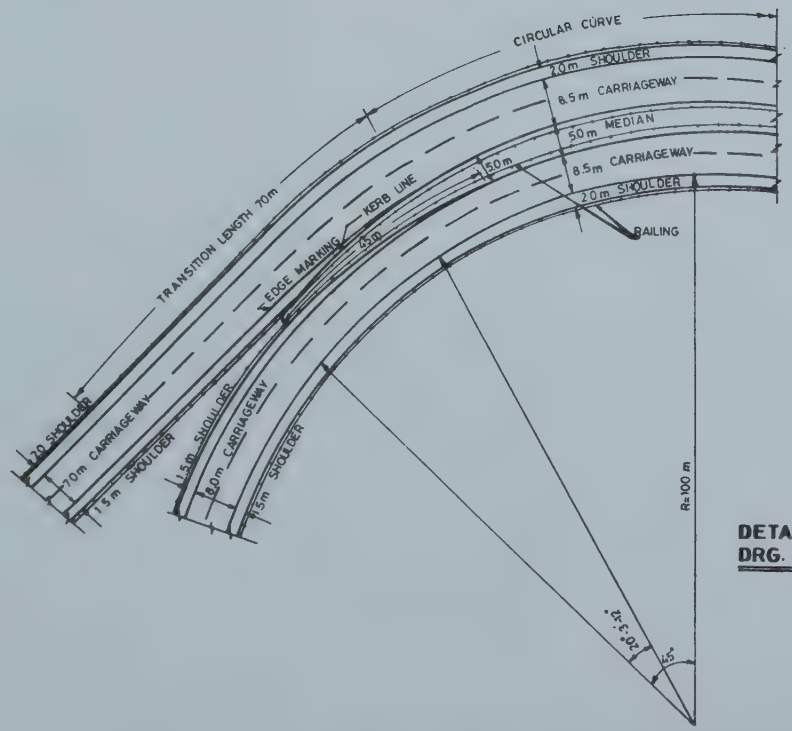
NH4-SH4/11/56/1



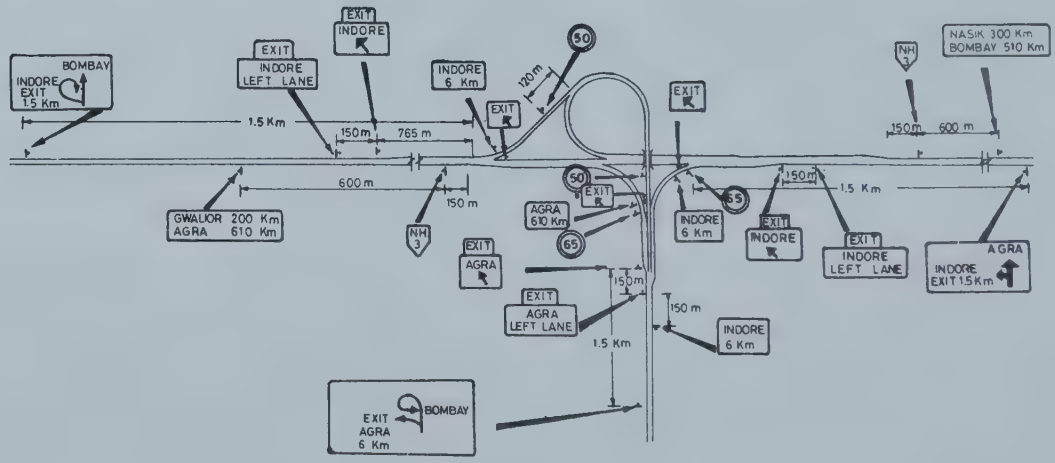
DETAIL AT-'X' IN DRG. NO: 56



DETAIL AT-'Z' IN DRG. NO: 56



DETAIL AT-'Y' IN DRG. NO: 56



TRAFFIC SIGNS FOR TRUMPET INTERCHANGE

(NOT TO SCALE)

NOTES

1. THE DETAILS MAY BE HAD IN CONJUNCTION WITH THE GENERAL LAYOUT DRG NO.56.
2. FOR DETAILS OF TRAFFIC MARKINGS SEE DRG NOS. 61 AND 62. GUIDANCE MAY ALSO BE HAD FROM IRC : 35.
3. THE GORE AREA SHOULD BE CLEAR OF HAZARDOUS OBSTRUCTIONS. WHERE THESE ARE PROVIDED, ENERGY DISSIPATING AND HAZARDOUS DEVICES MUST BE USED IN FRONT OF THEM.
4. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLANDS REFER TO DRG NO. 63.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

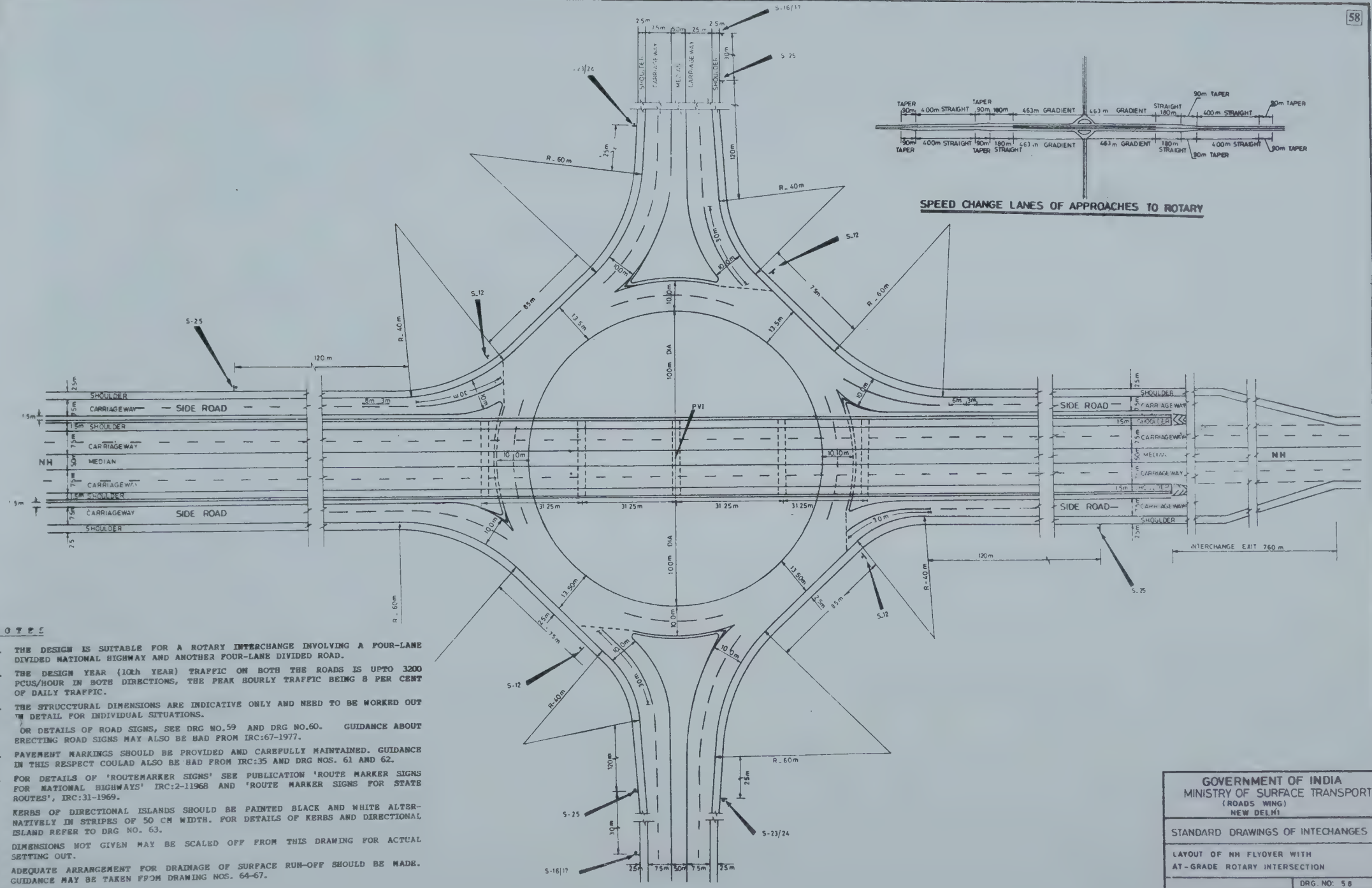
STANDARD DRAWINGS OF INTERCHANGES

TRUMPET INTERCHANGE-DETAILS AT 'X','Y','Z' IN DRG.NO 56 AND TRAFFIC SIGNS.

SCALE: 0 5 10 15 20 m
1 : 500

DRG. NO: 57

NH4-SH4/TI/57/2



SPEED CHANGE LANES OF APPROACHES TO ROTARY

NOTES

1. THE DESIGN IS SUITABLE FOR A ROTARY INTERCHANGE INVOLVING A FOUR-LANE DIVIDED NATIONAL HIGHWAY AND ANOTHER FOUR-LANE DIVIDED ROAD.
2. THE DESIGN YEAR (10th YEAR) TRAFFIC ON BOTH THE ROADS IS UPTO 3200 PCUS/HOUR IN BOTH DIRECTIONS, THE PEAK HOURLY TRAFFIC BEING 8 PER CENT OF DAILY TRAFFIC.
3. THE STRUCCTURAL DIMENSIONS ARE INDICATIVE ONLY AND NEED TO BE WORKED OUT IN DETAIL FOR INDIVIDUAL SITUATIONS.
4. FOR DETAILS OF ROAD SIGNS, SEE DRG NO.59 AND DRG NO.60. GUIDANCE ABOUT ERECTING ROAD SIGNS MAY ALSO BE HAD FROM IRC:67-1977.
5. PAVEMENT MARKINGS SHOULD BE PROVIDED AND CAREFULLY MAINTAINED. GUIDANCE IN THIS RESPECT COULAD ALSO BE HAD FROM IRC:35 AND DRG NOS. 61 AND 62.
6. FOR DETAILS OF 'ROUTEMARKER SIGNS' SEE PUBLICATION 'ROUTE MARKER SIGNS FOR NATIONAL HIGHWAYS' IRC:2-11968 AND 'ROUTE MARKER SIGNS FOR STATE ROUTES', IRC:31-1969.
7. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERBS AND DIRECTIONAL ISLAND REFER TO DRG NO. 63.
8. DIMENSIONS NOT GIVEN MAY BE SCALED OFF FROM THIS DRAWING FOR ACTUAL SETTING OUT.
9. ADEQUATE ARRANGEMENT FOR DRAINAGE OF SURFACE RUN-OFF SHOULD BE MADE. GUIDANCE MAY BE TAKEN FROM DRAWING NOS. 64-67.
10. THE ROTARY SHOULD BE ILLUMINATED.
11. FOR DETAILS OF SPEED CHANGE LANES AT EXIT FROM MAIN HIGHWAY SEE DRG NO.55.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

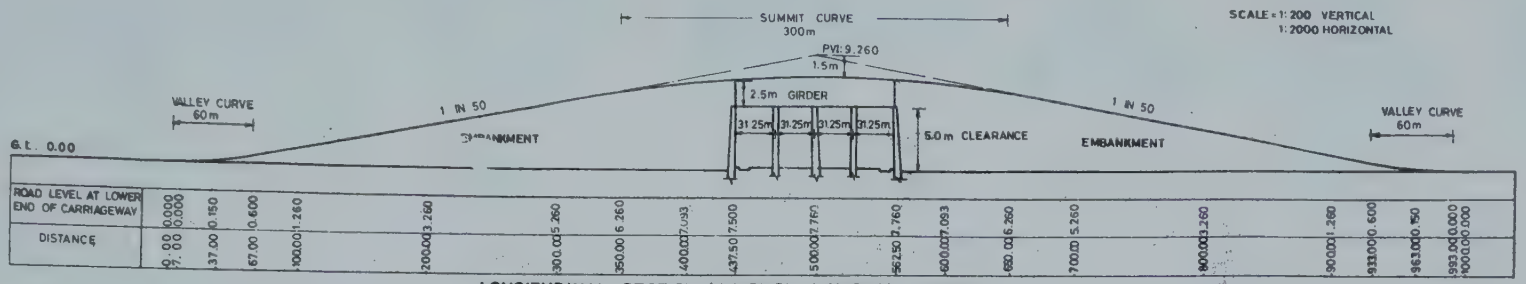
STANDARD DRAWINGS OF INTECHANGES

LAYOUT OF NH FLYOVER WITH AT-GRADE ROTARY INTERSECTION

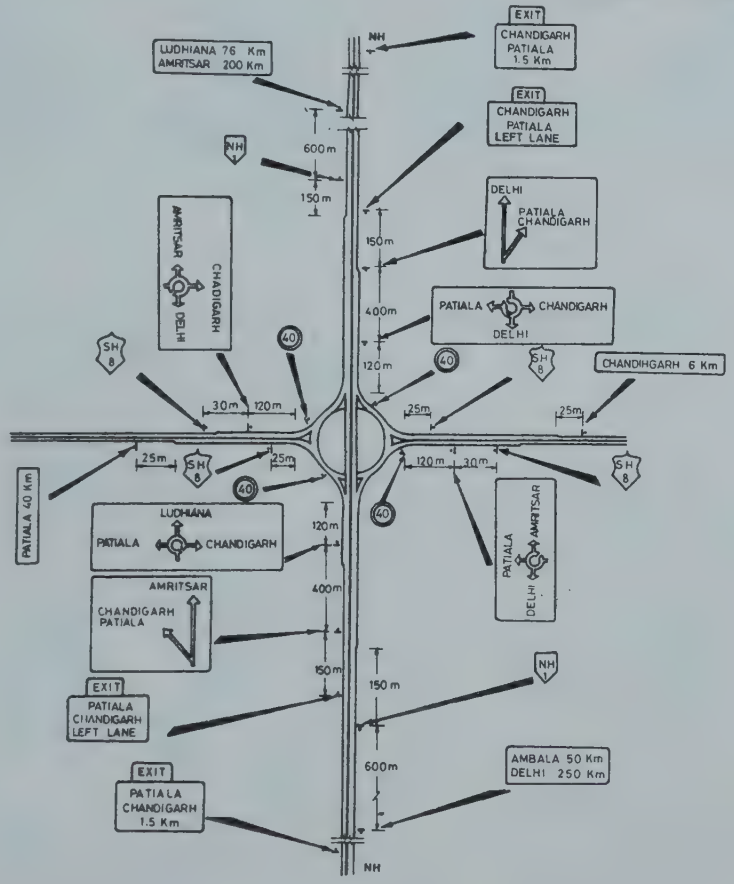
SCALE : 0 5 10 15 20m
1 500

DRG. NO: 58

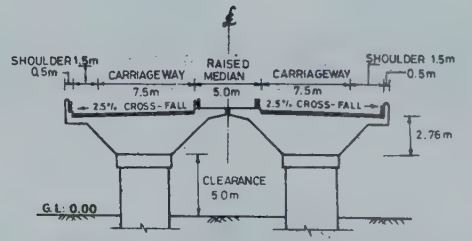
NH4-SH4/RI/58/1



LONGITUDINAL SECTION THROUGH NATIONAL HIGHWAY

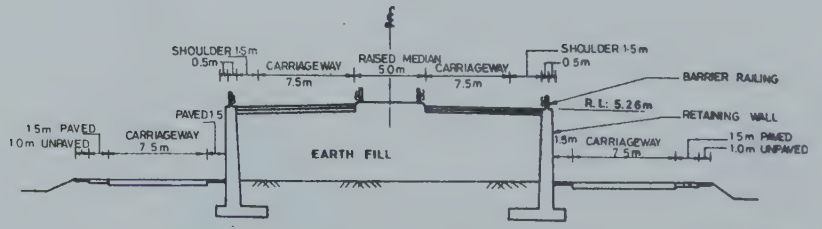


LOCATIONS OF TRAFFIC SIGNS



SCALE = 1:200

CROSS SECTION AT CENTRE OF OVER BRIDGE



SCALE = 1:200

CROSS SECTION AT CHAINAGE 300/700

NOTES

1. THE DETAILS MAY BE READ IN CONJUNCTION WITH THE GENERAL LAYOUT DRG NO.58.
2. FOR DETAILS OF TRAFFIC MARKINGS SEE DRG NOS. 61 AND 62. GUIDANCE MAY ALSO BE HAD FROM IRC : 35.
3. THE GORE AREA SHOULD BE CLEAR OF HAZARDOUS OBSTRUCTIONS. WHERE THESE ARE PROVIDED, ENERGY DISSIPATING AND HAZARDOUS DEVICES MUST BE USED IN FRONT OF THEM.
4. KERBS OF DIRECTIONAL ISLANDS SHOULD BE PAINTED BLACK AND WHITE ALTERNATIVELY IN STRIPES OF 50 CM WIDTH. FOR DETAILS OF KERB AND DIRECTIONAL ISLANDS REFER TO DRG NO.63.
5. DIMENSIONS NOT GIVEN MAY BE SCALED OFF.
6. THE SPAN ARRANGEMENT AND STRUCTURAL DETAILS OF BRIDGE SHOWN IN THE DRAWING ARE ONLY INDICATIVE AND SHOULD BE PROVIDED AS PER ACTUAL REQUIREMENTS.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS OF INTERCHANGES

NH FLY-OVER WITH AT-GRADE ROTARY INTERSECTION - LONGITUDINAL PROFILE, CROSS-SECTIONS AND LOCATIONS OF TRAFFIC SIGNS

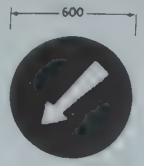
SCALE: AS INDICATED

DRG. NO: 59

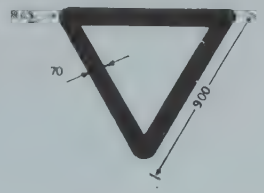
NH4-SH4/R1/59/2

STOP
S-1

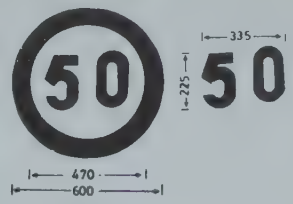
FOR CENTRAL ISLAND STOP SIGN SIZE SHALL BE OF 600



COMPULSORY KEEP LEFT
S-2



GIVE WAY
S-3



SPEED LIMIT
S-4

CROSS ROAD
S-8

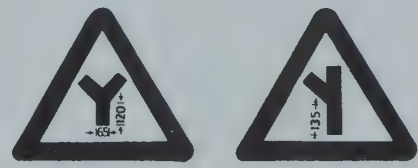
SIDEROAD-RIGHT
S-9

LEFT TURN PROHIBITED
S-10

T INTERSECTION
S-11

ROUNDABOUT
S-12

STAGGERED INTERSECTIONS
S-13

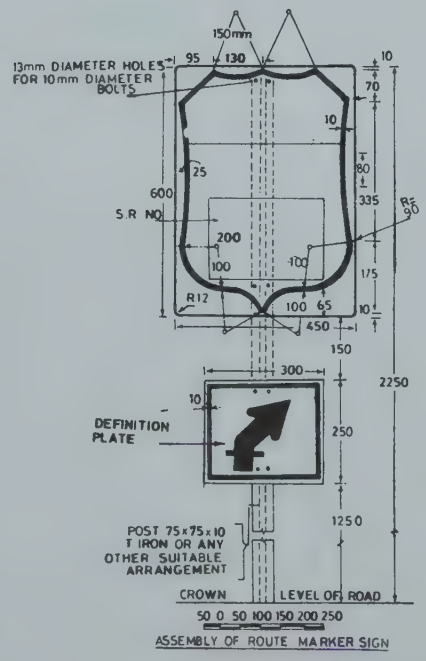


'Y' INTERSECTIONS
S-14

ROAD WIDENS AHEAD
S-15

NH ROUTE MARKER SIGN

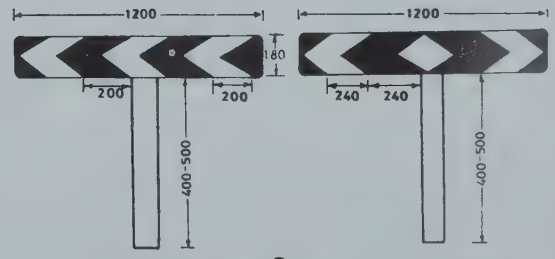
S-16
S-23



ASSEMBLY OF ROUTE MARKER SIGN

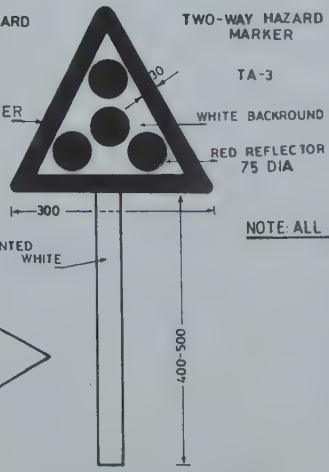
ARRANGEMENT FOR ERECTION OF STATE ROUTE MARKER SIGN

S-17
S-24



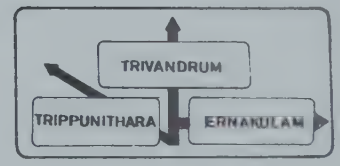
ONE-WAY HAZARD MARKER
TA-2

TWO-WAY HAZARD MARKER
TA-3

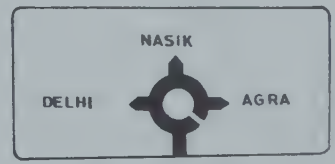


CLUSTER OF RED REFLECTORS
TA-1

DIRECTION SIGN
S-21



ADVANCE DIRECTION SIGN



ADVANCE DIRECTION SIGN FOR ROTARY

S-25

NOTE: ALL DIMENSIONS ARE IN MM

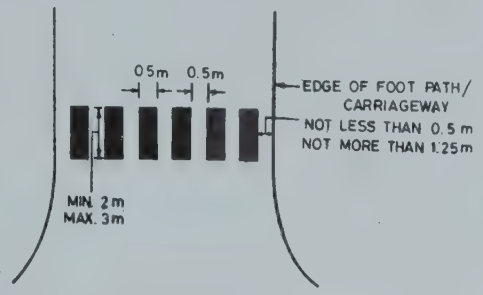
GOVERN MENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS OF INTERSECTIONS

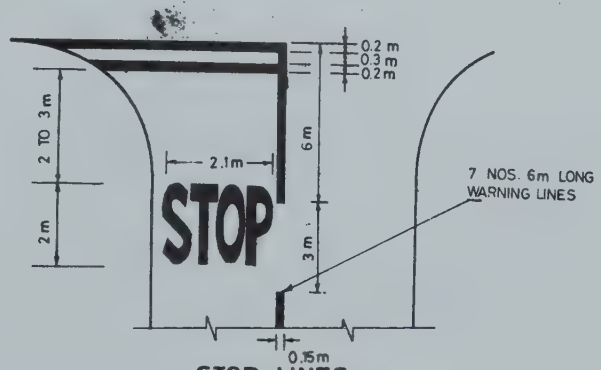
ROAD SIGNS

DRG.NO 60

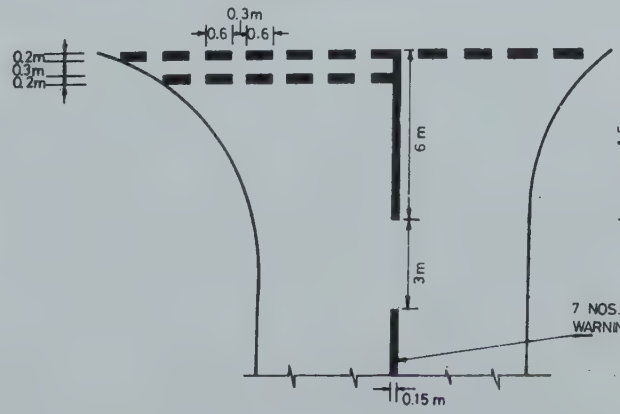
G-1 / 60



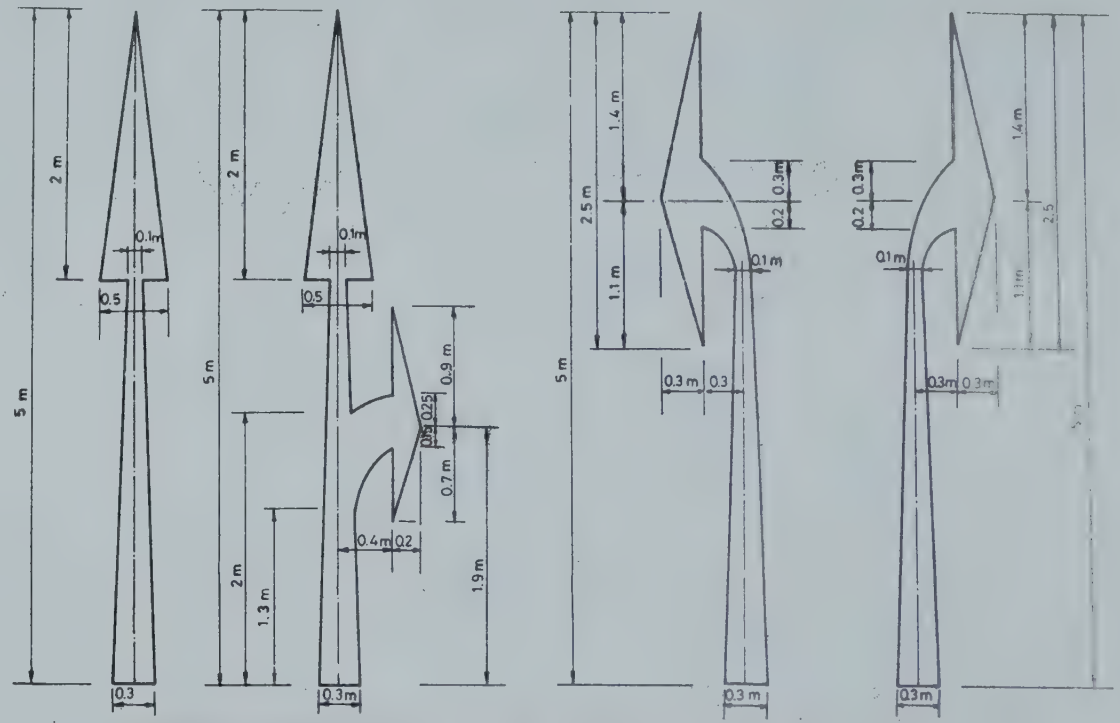
DETAILS OF PEDESTRIAN CROSSING MARKING



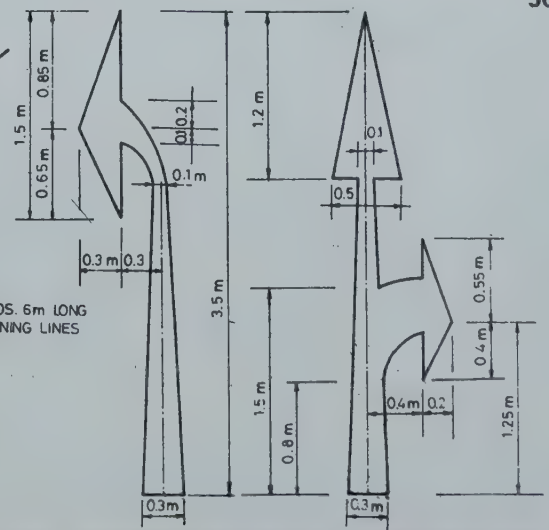
STOP LINES



GIVEWAY LINES

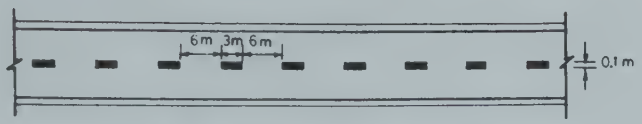


ARROW MARKING FOR ROUTE DIRECTION FOR DESIGN SPEED MORE THAN 50 K M/ HOUR

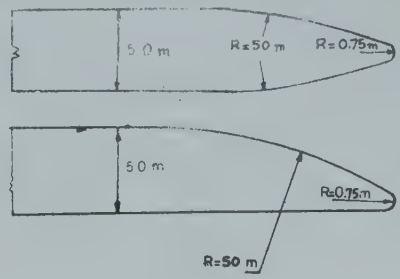


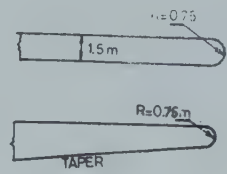
ARROW MARKING FOR ROUTE DIRECTION FOR DESIGN SPEED UP TO 50 K M / HOUR

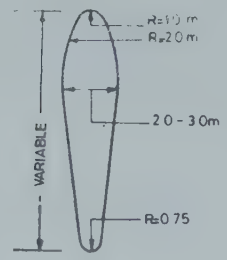
GOVERNMENT OF INDIA MINISTRY OF SURFACE TRANSPORT (ROADS WING) NEW DELHI	
STANDARD DRAWINGS OF INTERSECTIONS	
DRAWING SHOWING PAVEMENT MARKINGS FOR INTERSECTIONS	
	DRG. NO: 61 G-2/61/2



CENTRE LINE MARKING FOR TWO LANE ROAD
(BEYOND INTERSECTIONS)

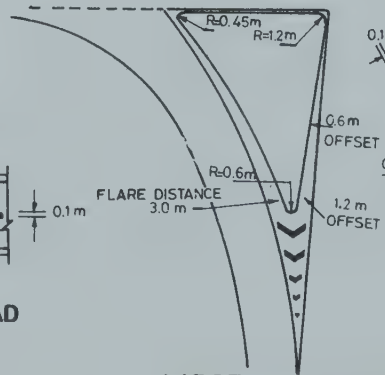




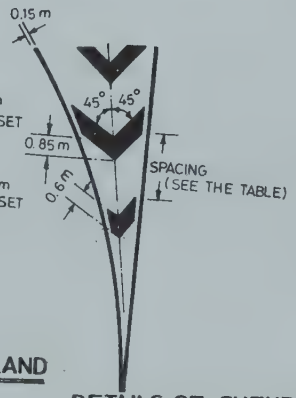


TYPICAL ISLAND DETAILS

CENTRE LINE MARKING FOR TWO LANE ROAD
(AT INTERSECTIONS)



LARGE SIZE ISLAND

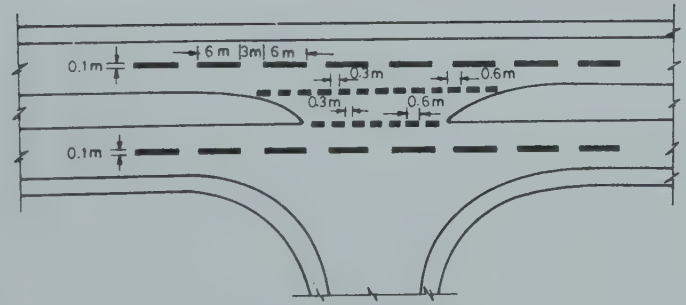


DETAILS OF CHEVRON MARKING

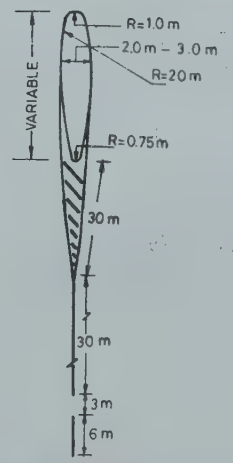
Total Length of Marking (m)	Spacing Between Bars or Chevrons (mm) Low Speed (75 km/h)	High Speed (75 km/h)
5.7	2100	-
5.7 to 22.5	3500	-
22.5	5000	-
10.5	-	4000
10.5	-	6000

NOTES:

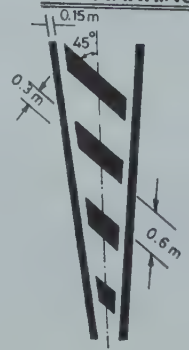
1. ALL LENGTHS AND SPACINGS IN THE TABLE ARE MEASURED PARALLEL TO ROAD CENTRE LINE.
2. FIRST BAR OR CHEVRON TO BE SO LOCATED THAT ITS OVERALL AVERAGE TRANSVERSE WIDTH IS AT LEAST EQUAL TO ITS LONGITUDINAL WIDTH.
3. WIDTH OF ALL BARS AND CHEVRONS MEASURED AT RIGHT ANGLES TO BAR OR CHEVRON IS 600 MM.



WARNING LINES



DIAGONAL MARKING IN ADVANCE OF DIRECTIONAL ISLAND



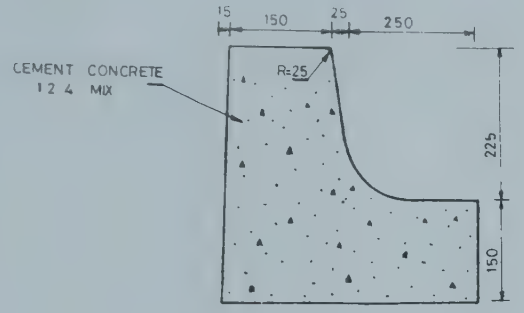
DETAILS OF DIAGONAL MARKING

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

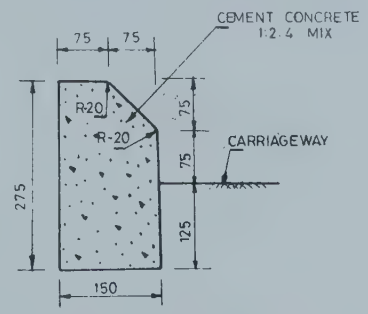
STANDARD DRAWINGS OF INTERSECTIONS

DRAWING SHOWING PAVEMENT MARKINGS FOR INTERSECTIONS

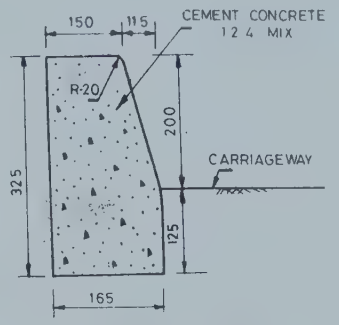
DRG NO. 62
G-2/62/2



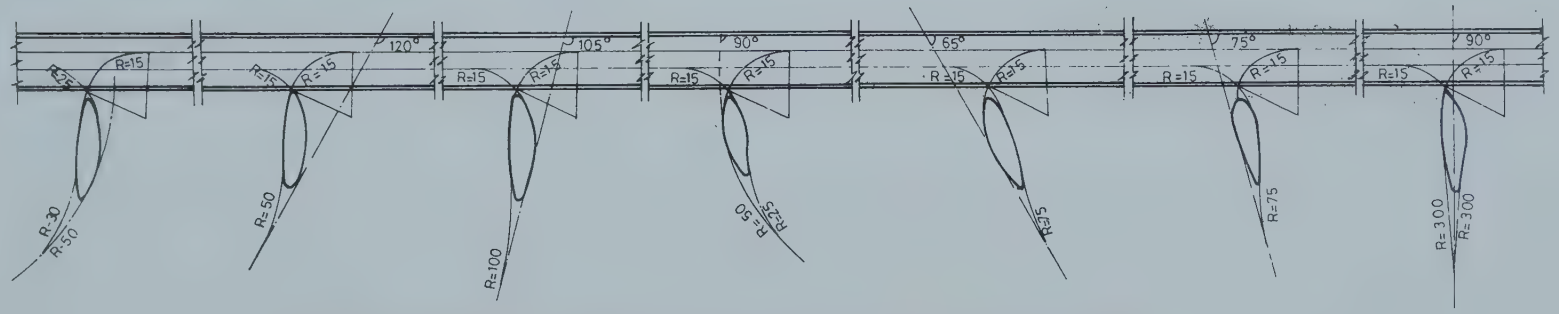
BARRIER TYPE KERB OF CEMENT CONCRETE
CENTRAL AND DIRECTIONAL ISLAND



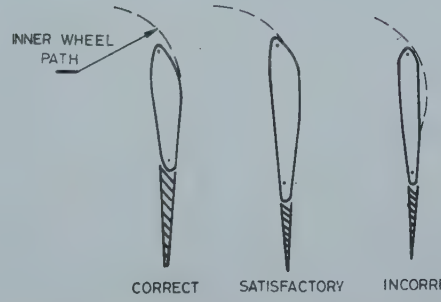
SECTION OF SEMI BARRIER TYPE KERB
OF CEMENT CONCRETE FOR CENTRAL
AND DIRECTIONAL ISLAND



SECTION OF BARRIER TYPE
KERB OF CEMENT CONCRETE
CENTRAL AND DIRECTIONAL ISLAND



SHAPING OF TRAFFIC ISLAND FOR DIFFERENT ANGLES OF TURNING



CORRECT METHOD OF SHAPING THE TRAFFIC ISLAND

KERB MARKING

ALL DIMENSIONS ARE IN M M

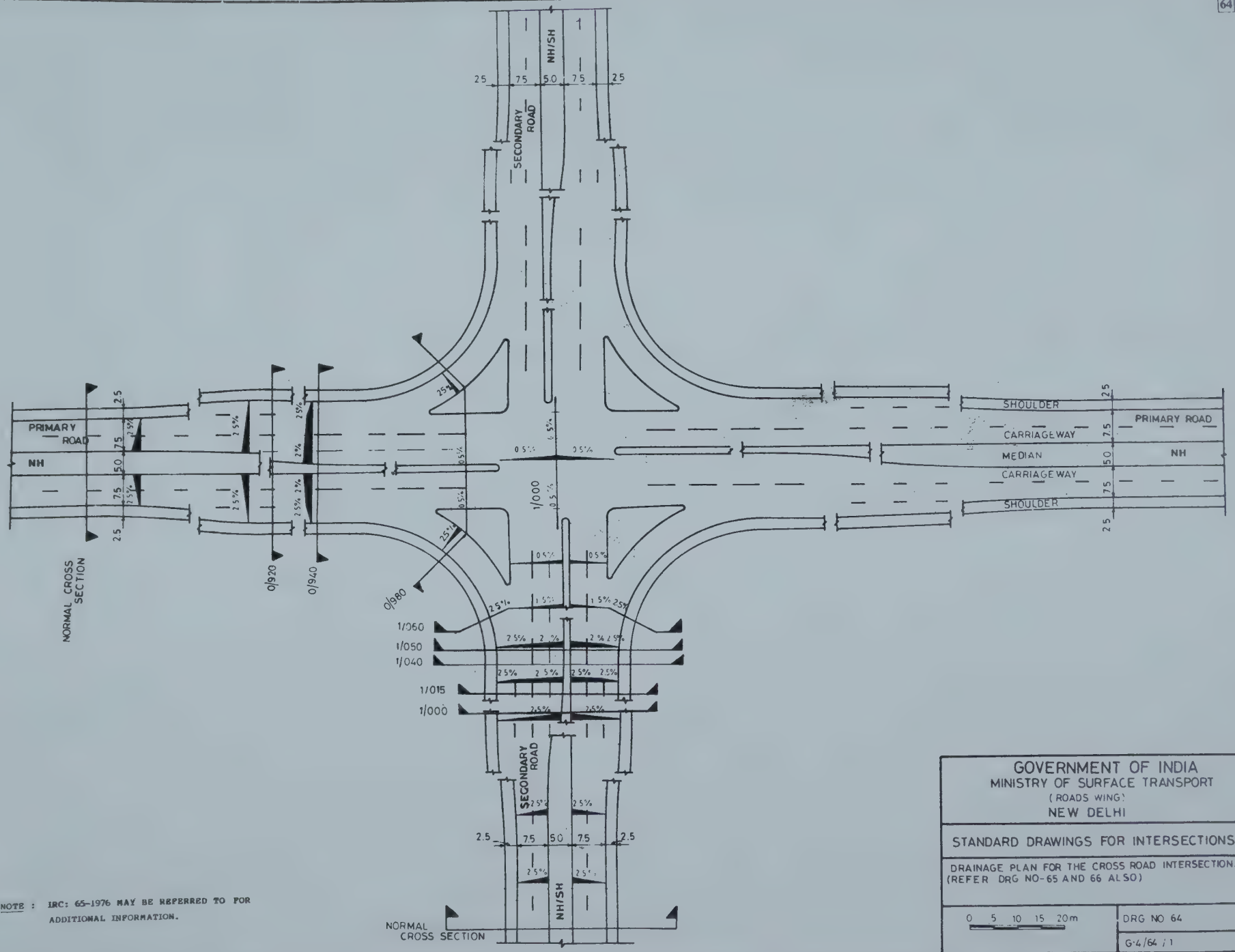
GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS OF INTERSECTIONS

DETAILS OF DIRECTIONAL ISLANDS AND KERBS

DRG. NO: 63

G-3 / 63



NOTE : IRC: 65-1976 MAY BE REFERRED TO FOR ADDITIONAL INFORMATION.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

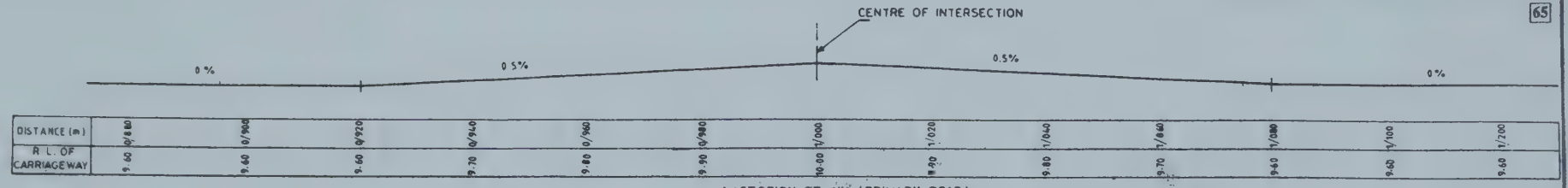
STANDARD DRAWINGS FOR INTERSECTIONS

DRAINAGE PLAN FOR THE CROSS ROAD INTERSECTION.
(REFER DRG NO-65 AND 66 ALSO)

0 5 10 15 20m

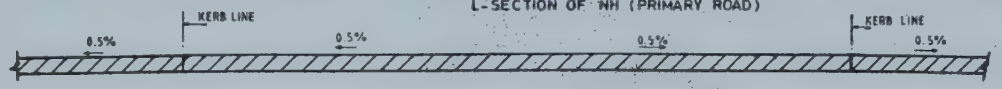
DRG NO 64

G-4/64 / 1



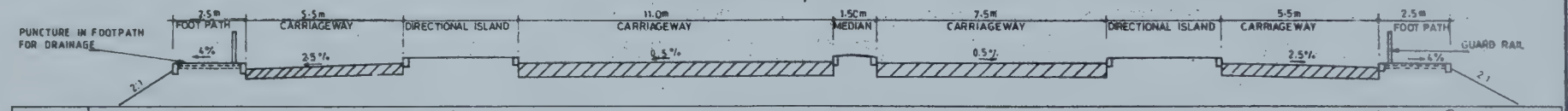
DISTANCE (m)	0/880	0/900	0/920	0/940	0/960	0/980	1/000	1/020	1/040	1/060	1/080	1/100	1/120
R.L. OF CARRIAGEWAY	9.60	9.60	9.60	9.70	9.80	9.90	10.00	9.90	9.80	9.70	9.60	9.60	9.60

L-SECTION OF NH (PRIMARY ROAD)



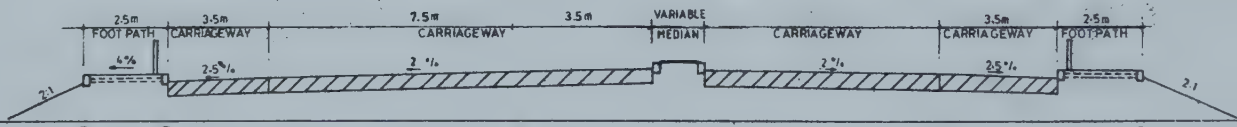
DISTANCE (m)	15.00	10.00	5.00	0.00	5.00	10.00	15.00
R.L. OF CARRIAGEWAY	9.93	9.95	9.98	10.00	9.98	9.95	9.93

X-SECTION AT 1/000



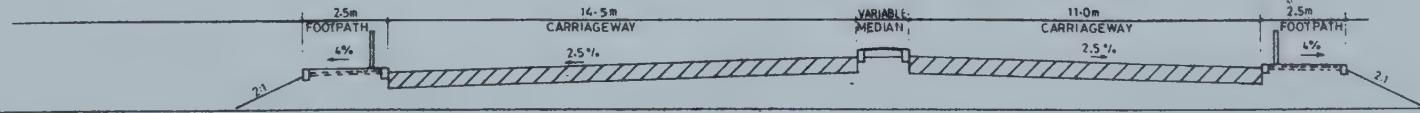
DISTANCE (m)	21.50	19.00	13.50	7.50	0.00	3.50	0.00	7.50	13.50	19.00	21.50
R.L. OF CARRIAGEWAY	9.67	9.72	9.86	9.86	9.90	9.92	9.90	9.86	9.86	9.72	9.67

CROSS SECTION AT K. 0/980



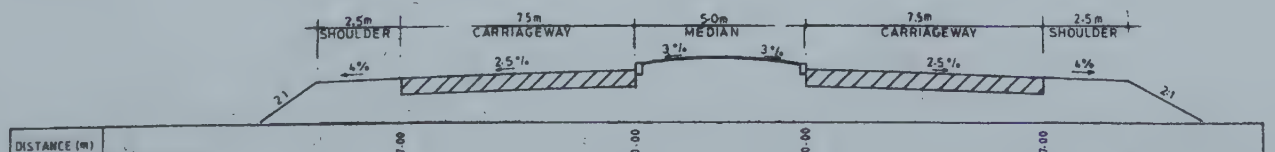
DISTANCE (m)	13.50	11.00	7.50	0.00	3.50	0.00	7.50	11.00	13.50
R.L. OF CARRIAGEWAY	9.36	9.46	9.55	9.70	9.77	9.70	9.55	9.46	9.36

CROSS SECTION AT K. 0/940



DISTANCE (m)	13.50	11.00	0.00	3.50	0.00	11.00	13.50
R.L. OF CARRIAGEWAY	9.23	9.33	9.60		9.60	9.33	9.23

CROSS SECTION AT K. 0/920



DISTANCE (m)	7.00	0.00	0.00	7.00
R.L. OF CARRIAGEWAY	9.31	9.41	9.60	9.60	9.41	9.31

NORMAL NH X SECTION

NOTES

1. THE DRAWING MAY BE REFERRED TO ALONG WITH DRG NOS.66 AND 67 WHERE DETAILS OF PAVEMENT SLOPES ARE GIVEN.
2. FOR DETAILS OF DRAINAGE SYSTEM CONSISTING OF INLET AND PIPE OUTLET DRG NO.67 MAY BE REFERRED TO.
3. THIS DRAWING MAY BE SEEN WITH REFERENCE TO DRAWING NO.64.

CROSS SECTIONS OF PRIMARY ROAD (NH)

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WINGS)
NEW DELHI

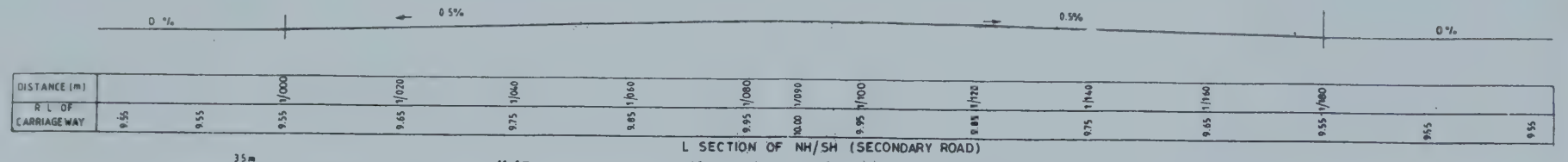
STANDARD DRAWINGS OF INTERSECTIONS

DRAWING SHOWING REQUIRED VERTICAL ALIGNMENT AND CROSS SECTIONS OF PRIMARY ROAD FOR DRAINAGE OF SURFACE RUN-OFF

SCALE : 1100

DRG NO 65

G-4/65/2

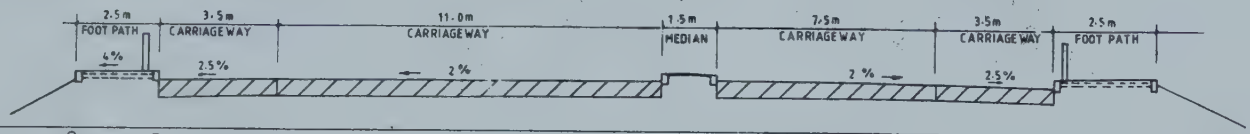


DISTANCE (m)																	
R L OF CARRIAGEWAY	9.55	9.55	9.55 1/000	9.65 1/020	9.75 1/040	9.85 1/060	9.95 1/080	10.00 1/090	9.95 1/100	9.85 1/120	9.75 1/140	9.65 1/160	9.55 1/180	9.55	9.55

L SECTION OF NH/SH (SECONDARY ROAD)

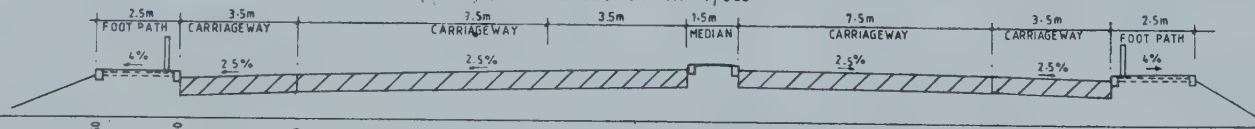
DISTANCE (m)													
R L OF CARRIAGEWAY	9.60	13.00	9.74	7.50	9.85	0.00	9.90	3.50	9.85	0.00	9.74	7.50	9.60	13.00

CROSS SECTION AT 1/060



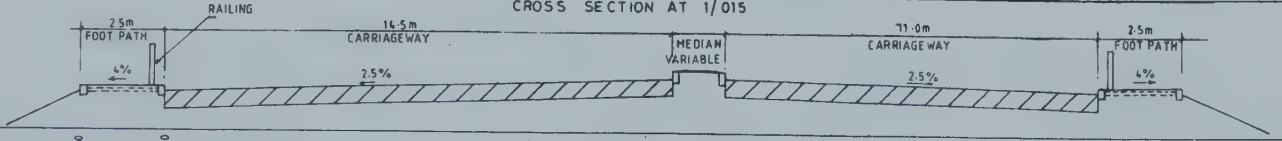
DISTANCE (m)													
R L OF CARRIAGEWAY	9.46	13.50	9.56	11.00	9.65	7.50	9.80	0.00	9.87	3.50	9.80	0.00	9.65	7.50	9.56	11.00	9.46	13.50

CROSS SECTION AT 1/050



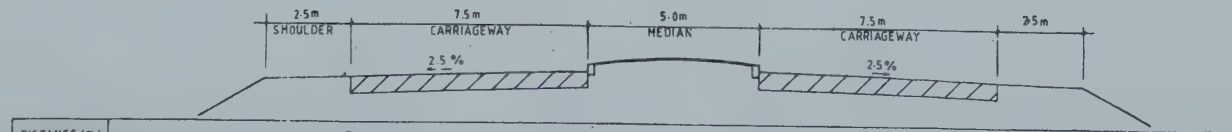
DISTANCE (m)													
R.L OF CARRIAGEWAY	9.26	13.50	9.36	11.00	9.44	7.50	9.63	0.00	9.72	3.50	9.63	0.00	9.44	7.50	9.36	11.00	9.26	13.50

CROSS SECTION AT 1/015



DISTANCE (m)													
R.L. OF CARRIAGEWAY	9.18	13.50	9.28	11.00	9.55	0.00	9.64	3.50	9.55	0.00	9.28	11.00	9.18	13.50

CROSS SECTION AT 1/000



DISTANCE (m)										
R L OF CARRIAGEWAY	9.36	7.00	9.55	0.00	9.55	10.00	9.36	7.00

NORMAL CROSS SECTION

N O T E'S

1. THIS DRAWING MAY BE REFERRED TO ALONG WITH DRG NOS. 65 AND 67.
2. FOR DETAILS OF DRAINAGE SYSTEM CONSISTING OF INLET AND PIPE OUTLET DRG NO. 67 MAY BE REFERRED TO.
3. THIS DRAWING MAY BE SEEN WITH REFERENCE TO DRAWING NO.64.

CROSS SECTIONS OF SECONDARY ROAD (NH/SH)

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

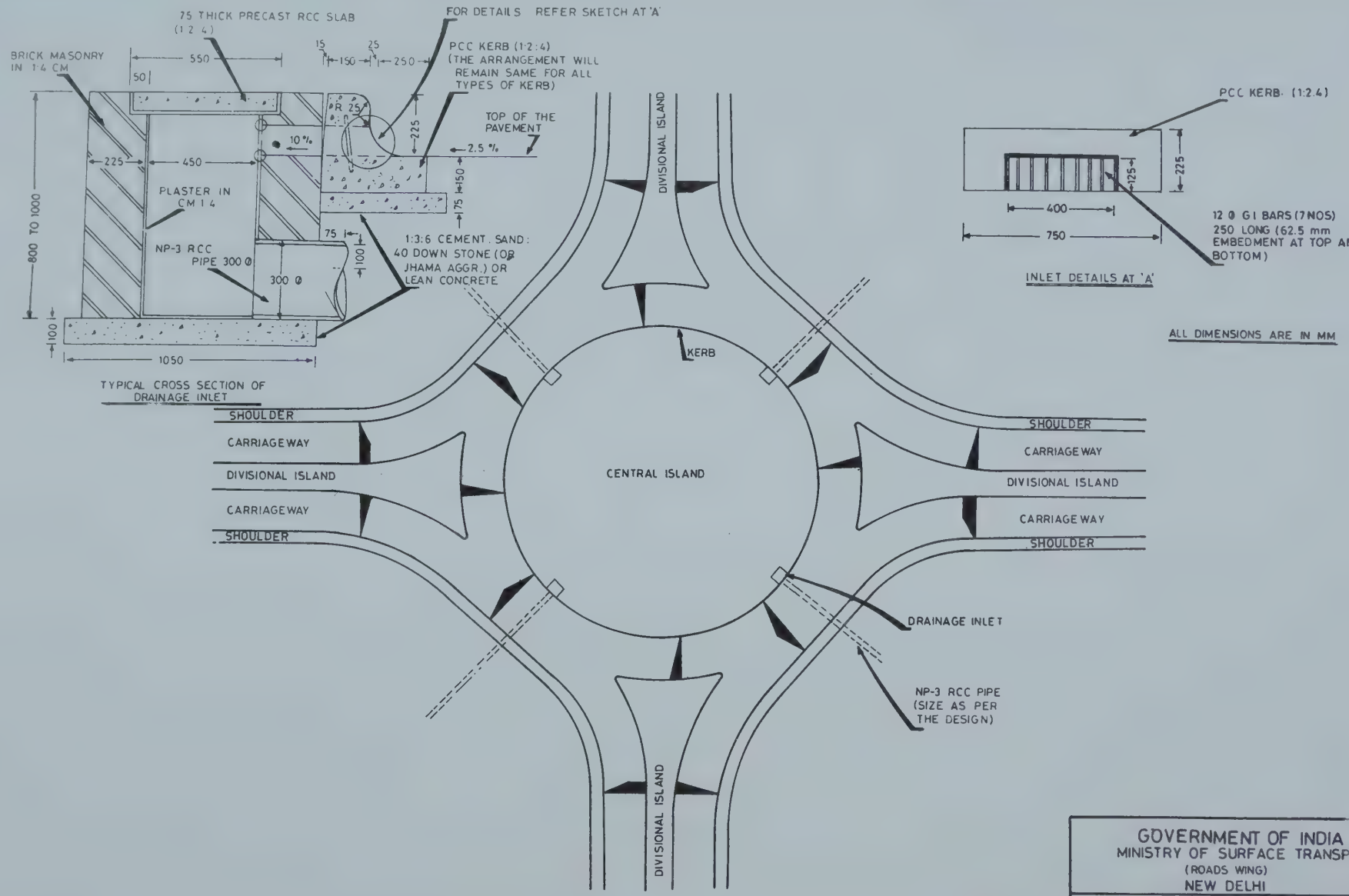
STANDARD DRAWINGS OF INTERSECTIONS

DRAWING SHOWING REQUIRED VERTICAL ALIGNMENT AND CROSS SECTIONS OF SECONDARY ROAD FOR DRAINAGE OF SURACE RUN-OFF

SCALE 1 100

DRG NO. 66

G-4 / 66/ 3



NOTES

1. THE DRAWING MAY BE REFERRED TO ALONG WITH DRG NOS. 65 AND 66 WHERE DETAILS OF PAVEMENT SLOPES ARE GIVEN.

GOVERNMENT OF INDIA
MINISTRY OF SURFACE TRANSPORT
(ROADS WING)
NEW DELHI

STANDARD DRAWINGS OF INTERSECTIONS

DRAINAGE ARRANGEMENTS FOR A ROTARY INTERSECTION AND INLET DETAILS

DRG. NO. 67

G-4/67/4